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HOSPITALS FOR COMMUNICABLE DISEASES

Principles to be Observed in Planning for Isolation Areas—The Barrier System Versus Architectural Isolation—Plans Illustrating the Principles Discussed

By RICHARD E. SCHMIDT, F.A.I.A., of Schmidt, Garden & Martin, Architects, Chicago, With an Editorial Introduction.

EDITORIAL INTRODUCTION.

JUST now the great number of communicable diseases in the military camps scattered over the country have made the isolation and care of the communicable diseases a very live topic. We have nothing to do with the isolation of soldiers in camp, but this problem is quite as acute in the civil hospitals as it is in military camps, and there are probably a thousand or more hospital superintendents just at the present time thinking about building isolation pavilions for the care of the communicable diseases or about making alterations to fit some present hospital areas to take care of these classes.

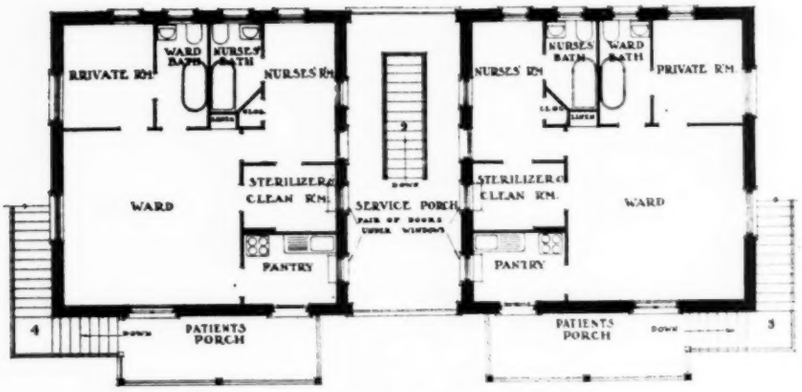
For these reasons a discussion of hospital plans for isolation areas ought to be profitable and instructive, and we have asked Mr. Richard E. Schmidt, the hospital architect, to present some plans of isolation buildings that he has recently put up and plans of others designed on the same principles, and to discuss the reasons for the arrangements that he has made. He is doing so in an article and illustrations following this introduction. We are taking the liberty of discussing the problem of isolation preliminary to a study of his plans.

Some four or five years ago Dr. D. L. Richardson, working in collaboration with Dr. Charles V. Chapin, gave much publicity to the plans of the Providence City Communicable Disease Hospital, and there was much discussion about the methods in that institution for the technical care of the communicable diseases.

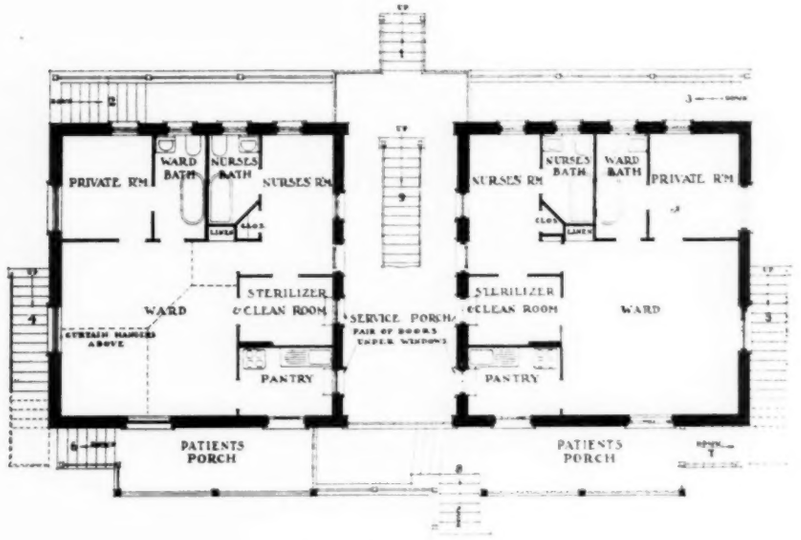
The Providence City Hospital was arranged just as any other acute disease general hospital is designed, and the prevention of cross-infections was left entirely to the technical methods employed. Dr. Richardson had no other visiting physicians in his hospital. He employed resident assistants by the year, and they were frequently retained for several years. Most of his nurses were graduates and were retained over long periods of time; the orderlies and maids were paid high wages and were consequently more or less permanent.

Using this kind of personnel, Dr. Richardson could train the individuals to carry out a carefully designed technic so that cross-infections were the exception and not the rule. But even under these rigid conditions there was a measurable percentage of cross-infections.

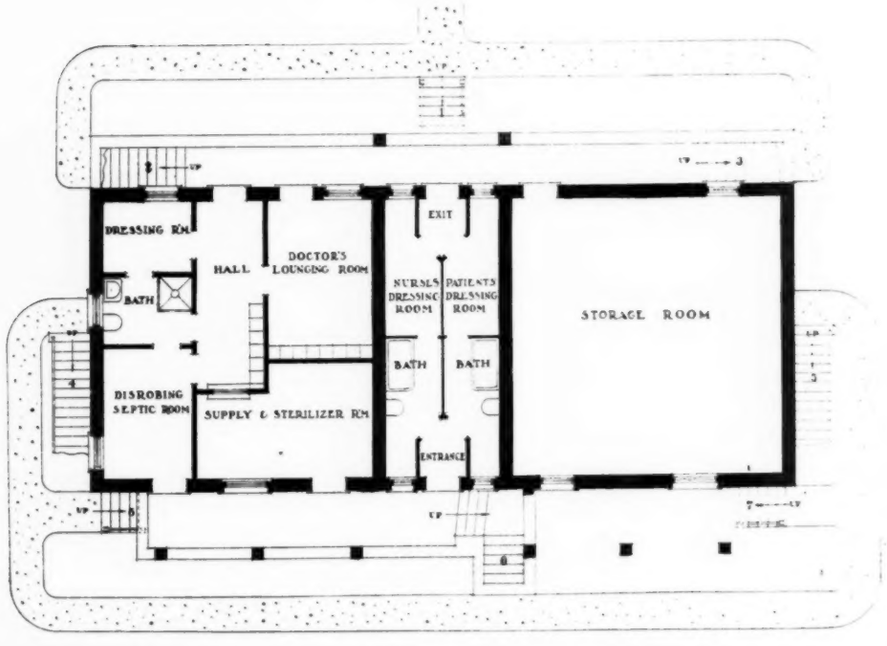
Hardly any other institution in the country could be maintained as Dr. Richardson's hospital was managed. In most institutions there are many practicing physicians who visit the infectious disease areas. Interns and pupil nurses are employed, and these young men and young women rotate rapidly so that they do not stay long enough to acquire a precise technic. Many visiting doctors refuse to obey rules of technic of any sort and consider themselves above obedience to any rules whatever. Maids and orderlies in most hospitals are paid such low wages that they go and come frequently, and those who work in the infectious disease department do not obtain higher wages for this service, and it is extremely objectionable service to them because they are not allowed free intercourse with the outside world.



Second floor plan.



First floor plan.



Ground floor plan.

Fig. 1. Plans of the isolation building of Michael Reese Hospital, comprising a basement and two stories, with four complete units for patients in the first and second stories. The units can be thoroughly fumigated without damage to the structure.

Consequently they are always going and coming.

The net result is that, in nine of these hospitals out of ten, it is impossible to perfect a segregation by technical methods alone; hence it is obviously necessary that we seek in some other direction the necessary methods by which cross-infections may be reduced to the lowest possible point. The one single way is to provide the essentials for the prevention of cross-infections in the architecture of the building.

This subject has been given an immense amount of thought, and Mr. Schmidt's new buildings are the result of some most careful study, not only of the architect but of trained hospital administrators, specialists in the medical profession in the communicable diseases, and of the most carefully trained members of training schools.

In Mr. Schmidt's buildings the main principle is followed that the communicable diseases are passed from individual to individual by direct contact as distinguished from what used to be known as "air infection."

The little hospital that Mr. Schmidt presents, which is a part of Michael Reese Hospital, Chicago, is a case in point and specially applicable. Michael Reese is an institution of some 500 beds with a children's building of 150 beds. The communicable diseases are not accepted in the hospital as a rule, and the isolation building was constructed only for the purpose of taking care of communicable

infections that developed in the institution itself. These diseases were not only the communicable diseases of childhood, such as diphtheria, scarlet fever, measles, whooping cough, chicken pox, mumps, etc., but also erysipelas and puerperal fever that might develop in the adult parts of the hospital. The other plans that Mr. Schmidt is presenting speak for themselves.—J. A. HORNSBY.

DISCUSSION OF PLANS BY MR. SCHMIDT.

The plans presented in this article are not intended for large city hospitals manned in the manner in which the Providence City Hospital

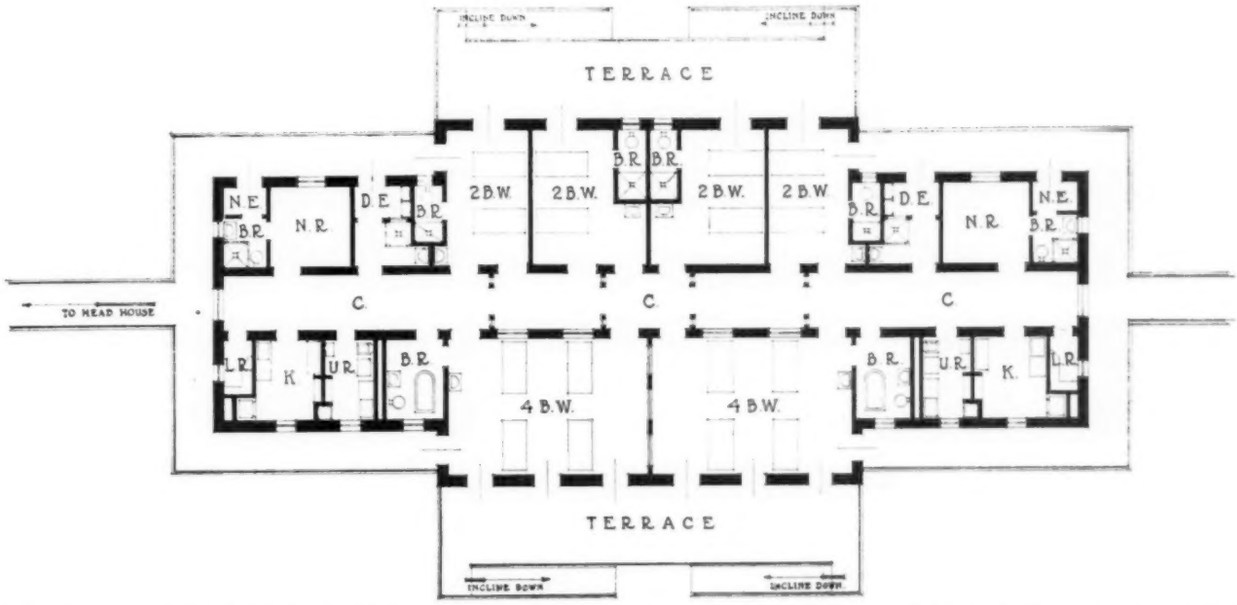


Fig. 2. Plan of a sixteen-bed isolation hospital for two diseases, designed to be operated according to the same technic as that used in the isolation building of Michael Reese Hospital (Fig. 1).

B. W. Bed ward. U. R. Utility room. L. R. Linen room. N. E. Nurses' entrance. C. Corridor.
N. R. Nurse's room. B. R. Bath room. D. E. Doctors' entrance. K. Kitchen.

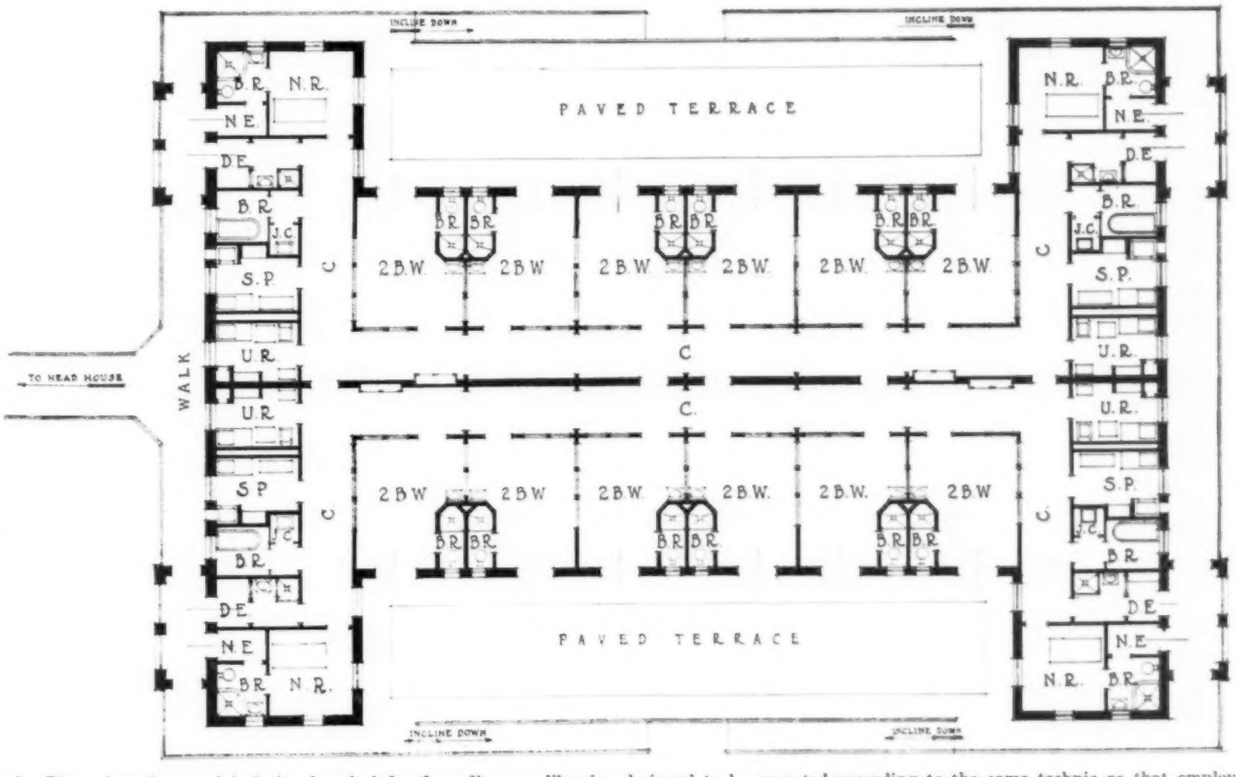


Fig. 3. Plan of twelve-ward isolation hospital for four diseases, likewise designed to be operated according to the same technic as that employed in the isolation building (Fig. 1). These three plans are based on a unit system which has great elasticity.

B. W. Bed ward. U. R. Utility room. S. P. Serving pantry. D. E. Doctors' entrance. K. Kitchen.
N. R. Nurse's room. B. R. Bath room. J. C. Janitors' closet. N. E. Nurses' entrance. C. Corridor.

is served as described by Dr. Hornsby in the preceding article, although they can be developed to any size without deviating from the principles on which they are based.

The principles which governed the planing are based on the assumption that the technic of treating patients afflicted with a contagious disease should follow the path of least resistance, i. e., that physical segregation by means of walls and other structural barriers and the use of articles

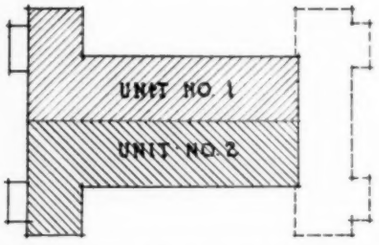


Fig. 4. Variation of twelve ward into four units.

which obviously indicate their intended function will compel the attendants to the performance of certain duties and make the probability of failure to comply with the rules of isolation less likely to occur and also prevent carelessness. It also seems certain that a non-compliance with the principles of isolation is less likely to occur in a hospital built as shown by the accompanying plans than in hospitals arranged in accordance with the barrier or cubicle systems.

A room, fixture, or article is provided for every step; the rules for physicians, nurses and other employees are, as a matter of course, the same as for any other type of plan, but the danger of cross-infection is reduced to a minimum.

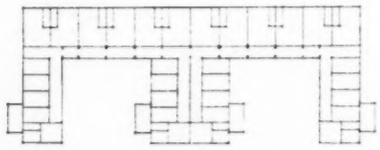


Fig. 5. Variation of the twelve-ward isolation hospital for four diseases shown in Fig. 3.

Inasmuch as the attending physician, the person who is trained and appreciates the technic of isolation, is the only one of the several engaged in this work who will at times be in contact with the several communicable diseases, the nurses and other attendants, who are engaged in these duties only intermittently in this field of hospital work, will be in contact with only one of the infectious diseases, the probabilities of a breakdown of principles and rules is unlikely.

In large institutions established solely for the purpose, where a trained staff is always at hand, the barrier system can no doubt be operated with fair success, but in small communities and in contagious hospitals which are auxiliaries of general hospitals in cities having established public hospitals for contagious diseases, in which such cases are not constantly under treatment, and where the field is not large enough to invite or require the constant attendance of specialists and where a single emergency case is likely to arise and untrained help must be employed at very short notice, every employee can follow the technic almost automatically without previous experience or a long term of coaching.

Fig. 1 illustrates the isolation building of the Michael Reese Hospital; it has a basement and two stories and is of fire-resisting construction. It contains four complete units for patients in the first and second stories. The construction is such that the units can be fumigated and disinfected most thoroughly without damage to the structure.

Food may be passed into the units without danger of passing the infection to the orderly carrying it, and soiled linen, used dishes, and garbage

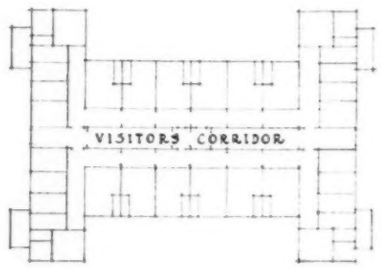


Fig. 6. An inclosed visitor's corridor so arranged that maximum flexibility is maintained. The wall between the visitors' corridor and the ward corridor is to be glazed.

may be passed out of each unit without danger of infection to those receiving it. Arrangements have been made by which a physician, patient, or nurse may be cleaned up and cleared out of the premises without taking any of the elements of infection with him or her.

Each unit comprises the following rooms, namely: three-bed ward, one-bed ward, patients' bath and toilet room, nurse's bedroom, nurse's bath and toilet, pantry, and sterilizing rooms.

Food, clean linen and other supplies will be brought to the respective porch windows and set upon the shelf of the window so that the nurse can reach it. The soiled linens, used dishes and garbage are to be deposited by the nurse in tanks placed in an enclosed space under the window shelves. These tanks are of galvanized iron and filled with disinfecting solutions. When the nurse desires to deposit soiled linens, she lifts the lid of the tank and drops the linen into it. The orderly can come later, wring out and remove the linens, and take them to the laundry. Soiled dishes are treated similarly.

The physician who has come to examine a patient enters the basement hall and deposits his outer garments in the lounging room, clothes himself with visiting garments taken from lockers in the hallway in the dressing room, and proceeds up any flights of stairs which may lead into the unit he wishes to visit. After the visit he returns to the ground by one of the stairways and removes

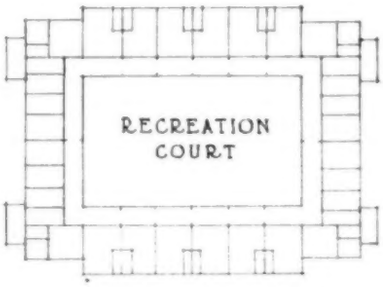


Fig. 7. An inclosed open-air recreation court. This arrangement is not quite so flexible as that shown in Figs. 2, 3, 4, 5, 6.

his visiting clothes in the disrobing room, and if he wishes to visit another patient in the same building he will take other clean visiting apparel from another locker and repeat the procedure as many times as necessary, each time following the some order. When he has made his final visit he removes all of his clothing, takes a shower bath, dons street clothing in the dressing room, takes

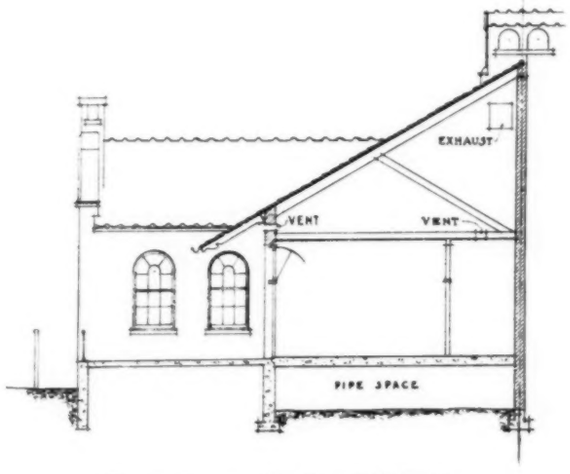


Fig. 8. Cross-section through building.

his outer garments from the lounging room and from there passes out into the street, or back to the general hospital.

It is not necessary to enlarge on other details which are required for a proper technic.

When the patient and nurse are ready to leave the building they will leave by one of the "porches for patients." The windows leading to these extend to the floor. A separate stairway has been provided from each patient's porch to the ground level. The patient and nurse will separate in the basement exit, bathe and don clean clothing in their respective bath and dressing rooms, and, no longer a menace to the community, leave the building by the doorway marked "exit."

Before leaving the unit the nurse will straighten up the apartment preparatory for subsequent fumigation and disinfection. In this procedure, as in the one for patients, there are many details of technic which it is not necessary to describe herein.

The service porches are intended for communication between the kitchen, laundry, and other service.

Electric fans are provided in the nurse's clean-up department in the basement, so that she may dry her hair rapidly.

If the patient is a child unable to disrobe, bathe, or re-clothe itself, the nurse must clean up and change her garments twice, first to assist the child, and again after having done this and passed it to a clean nurse on the outside.

The plans shown in Figs. 2, 3, and 7 have been designed to be operated according to the same technic as that selected for Plan 1. They are based on a unit system which has almost unlimited elasticity in the number of beds which are attached to one service and available for one disease, leaving the remaining rooms connected to other services and for other diseases; in consequence of this arrangement, a minimum number of nurses will be required and there is no danger of cross-infection.

The diagrams shown in Figs. 4, 5, and 6 illustrate the elasticity in numbers of patients and an inspection of Plans 2 and 3 indicates the doors which must be sealed to obtain the various combinations of rooms.

The patient capacity of plans 2, 3, and 7 can be increased to an unlimited extent by building them two stories in height, or a group of the same size or by increasing the number of wards between the services.

Inasmuch as elevators and dumb waiters obviously increase the danger of infection, it will probably be inadvisable to build more than two stories.

If two-story buildings are constructed, two stairs, one at each end of the building, will be necessary both for safety and for proper operation. One stair should be used for conveying infected, the other clean goods and persons. Both stairs should be well ventilated and separated from the building by open-air connections. Balconies should run around the entire building connecting the stairs with each other and the various parts of the building.

The rooms provided in the basement of Plan 1 for the discharge of patients and nurses and for

the use of the physician, in making his visits, can be provided either in the basement or in a small separate building or in a wing of the building.

While the rooms of Plans 2 and 3 are marked "two-bed wards" they would be admirable private rooms.

Plan 6 shows a glass-enclosed visitors' gallery, which may be an advisable provision in city owned contagious hospitals.

In preparing the plans it was assumed that these buildings would be on the grounds of a general hospital, so that they can have kitchen, laundry, power house and other general service from the general hospital plant. If, however, any one of them is built as a separate institution, it will be necessary to construct a head house for the following and other functions: (1) administrative offices, (2) receiving department with a few isolation rooms, (3) discharging rooms, (4) operating room, (5) house physicians' quarters, (6) nurses' quarters, (7) help's quarters, (8) laundry with goods sterilizing apparatus, (9) kitchens, (10) store rooms, (11) morgue and small chapel.

If connected with a general hospital: operating rooms, goods sterilizing apparatus if main laundry is not so equipped, receiving and discharging rooms, morgue and small chapel can be placed in basement of isolation building if first floor is well above grade.

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UNIVERSITY TRAINING FOR THE NAVY HOSPITAL CORPS*

How Bluejackets Are Instructed at the University of Minnesota Medical College for Duty Aboard Uncle Sam's Big Ships—Courses in Bandaging, Invalid Cookery, Practical Nursing, Etc., Readily Absorbed by Sailor Students

By WILLARD CONNELY, Chief Yeoman, U. S. N. R. F.

FOR the first time in history, medical bluejackets under training are enjoying the broad benefits of a medical college and its attached hospital. This most striking adjunct of the Minneapolis Naval Training Station, under the direction of Commandant Colby Dodge, U. S. N., marks a precedent which will be designated by future war chroniclers as unique, inspiring, and potent in efficacy. Regardless of remoteness from an ocean, the navy is welcoming just such invigorating departures throughout the land.

At the University of Minnesota medical school no curtailment if instruction for the regular civilian medical student was involved in this addition of one hundred men of the navy hospital corps. Professors in the college and nurses of the hospital training staff magnanimously volunteered extra services to teach the bluejackets. Arriving at the university from Pacific coast stations, most of the sailors were rated hospital apprentices second class, but in a few weeks' time Asst. Surgeon Olson, U. S. N., in charge of the sick bay of the Minneapolis training detachment, after an examination rated them all first class. These men have been despatched to duty aboard hospital ships or at naval hospitals up and down the Atlantic seaboard. With three months' intensive teaching at the university they were grounded in medical essentials of extraordinary scope and variety. Surgeon-General William C. Braisted, U. S. N., expressing his appreciation from Washington, has detailed a second hundred hospital corpsmen to follow the worthy footsteps of their predecessors at the Minneapolis station.

Fig. 1. University of Minnesota medical college dispensary, nose and throat clinic, where the bluejackets daily assist the surgeons, and learn something of diagnosis and quick treatment.

The course of instruction, admirably outlined by Dean Lyon of the medical school, runs six hours daily, or thirty hours each week. This work balances nicely between lectures and laboratory exercises in the morning and, from 1 p. m. until 4, clinics at the dispensary or practical nursing at the university hospital. Bandaging is given the bluejackets by Miss Louise Powell, superintendent of nurses; nursing by Miss Mary Vannier, assistant superintendent; invalid cookery by Miss Gertrude Thomas, dietitian. These instructors are aided by the staff of graduate nurses, while the interns as well give frequent lectures and demonstations to the men.

Before they were permitted to attend classes and to receive ward training within the hospital, the sailors took lectures and worked in the various laboratories of the medical school for a full month. There, too, they put in some good round hours of evening study over such treatises as Kimber's "Textbook of Anatomy and Physiology for Nurses," and Parker's "Materia Medica and Therapeutics."

"I enlisted in the navy so I wouldn't have to go to school," wailed one of the bluejackets, as he wrestled with an equation in chemistry. "And now look at me, up against a university!"

But nobody could have bribed him to quit his studies. When these men found that college education was thrust upon them, they took the bit like old stage horses; they didn't stagger. they pranced. Their average learning showed about three years in high school, which is to say that not a few of them had been in college or had just earned their academic degrees at the

*On February 18 Commander Walter J. Terhune, U. S. N., became commandant of the U. S. Naval Training Detachment in Minneapolis, while Ensign Colby Dodge, U. S. N., to date commanding officer, became executive officer.

time just enrolled in the service. Suddenly they found themselves pointed toward the naval rating of pharmacist's mate, an enviable billet which in likelihood leads ultimately to the substantial civilian professions of apothecary or, indeed, doctor of medicine. So they bent to their oars, every man of them, charged with enthusiasm, calculating their post-bellum destinies.

In order clearly to show how well prepared the sailors were to undertake intelligently their duties at the hospital, it may be in place to sketch briefly their courses in the medical school. Based on the Red Cross first-aid handy book, the lectures in minor surgery covered shock and hemorrhage, wounds and boils and their treatment, burns, frostbites and sunstroke, conditions which call for artificial respiration, carrying and handling the injured, poisons and antidotes, and common fractures and dislocations. Immediately following the minor surgery talks and demonstrations were lectures in pharmacology and therapeutics, including elementary chemistry, weights, measures and prescription writing, general and local anesthetics, soporifics and sedatives, salicylates and antipyretics, circulatory stimulants, purgatives, specific and alkali therapy and antiseptics. The next hour was claimed by anatomy, with lectures and dissections of joints, muscles, circulation, alimentary canal, and the nervous system. The work in physiologic chemistry embraced the composition, properties, and importance of carbohydrates, fats, proteins, and inorganic matter. In physiology of the animal machine, the bluejackets were shown stimulation and response, types of stimuli, of muscle, the nervous system including the spinal cord, and circulation, with blood vessels and the vasomotor system. Hygiene embodied a survey of blood, respiration, digestion, absorption, physiology of the skin, and heat producers. Bacteriology—one whole morning per week—covered staining, culture of bacteria, common pathogens, transmission of infection, disinfectants, and bacteriologic examination of water. Urinalysis included the tests for albumin and sugar, and detection and analysis of sediment. Moreover, the men were detailed in small groups each afternoon to the dispensaries, eye, ear, nose, throat, and dermatology.

Fig. 2. One of the operating rooms at Elliott Memorial Hospital, University of Minnesota medical college, where, by practicing irrigations on patients, the sailors gain confidence in their individual abilities.

Less than half the foregoing, of course, did the sailor students cover before they were ushered into the hospital. The more advanced topics they took up concurrently with the latter. I present the entire naval schedule at the college for the twofold purpose of conciseness and so that readers may see how, as the hospital instruction progressed, the medical school work interlocked with nicety to supplement it.

Bandaging is given in six periods of one and one-half hour each. Miss Powell and her assistant head nurses take the sailors in sections of twenty. The first lesson is principally a lecture and demonstration, covering the fundamental facts of the art, preparation of the wound and of the gauze, how to roll the bandage, starting, essential turns,

Fig. 3. By teaching the men in such small sections as this, the enhanced value of greater individual attention cannot be overestimated. The computation and administering of hypodermics can be learned thoroughly in no better way.

and ending. After that the bulk of the instruction consists in having the bluejackets practice upon one another, under the continued supervision and guidance of the nurses. Beginning with the one-inch bandage, the sailors apply the gauntlet, with tips covered, then with tips not covered. Whenever they remove a fillet they are

required to roll it up. Then they larn the spica of thumb, a type of dressing as frequently called for at sea as ashore. Proceeding to the two-inch bandage, the men are taught the spiral reverse, upper extremity, and the figure eight, upper extremity.

By the next lesson the jackies are ready to go ahead with the two and one-half inch size, both spiral reverse and figure eight, but for the foot and leg. They remove their shoes and roll up their wide-bottomed trouser legs, unexpectedly convenient and adaptable at this juncture. Having now learned to bind cinctures a little more rapidly, the sailor-students are permitted to use the mechanical bandage-roller, so that they put in not too much time on this operation. Then the Barton, the double oblique jaw, and the recurrent head follow as given, completing the period.

Fig. 4. In the laboratory of pharmacology and therapeutics, with Dr. Arthur Hirschfelder and Dr. Edgar Brown. After demonstrating such tests as shown, the professors require the men to repeat the work independently.

Advancing next time to the more complicated fillets, Miss Powell gives the men the crossed one eye, or monocle, the crossed both eyes, and the mastoid. By now the apprentices are ripe for a quiz, and their individual abilities are tested in the classroom; if one man winds incorrectly, his mates are asked to set him aright.

Then comes the Velpeau group, including the spica as shoulder, the triangle as Velpeau, triangle as sling, as hand, foot, and cap. These types comprise a good afternoon's work. The fifth period is given to the four-tailed styles, the occiput, vertex, the neck. At this point the handkerchief head is also learned. Of the elastic kinds only tourniquets are shown. To enter quickly the classroom where all this worried bandaging is proceeding so diligently is to imagine that an airplane bomb has just been dropped therein, that the uninjured bluejackets rushed swiftly to the aid of their wounded comrades, so intently, so carefully, is each man encircling wrappings about head, arm, or leg of his submissive mate. To complete the verisimilitude nothing lacks but the groans.

Miss Powell finishes this excellent course with a demonstration of applying adhesive tapes, fenestration and application and removal of plaster-of-paris casts. After such instruction Ensign Dodge believes his apprentices can go to sea capable of bandaging anything up to and including a leak in a ship.

The work in invalid cookery is also accorded six and one-half hour periods. Miss Thomas starts her course with an explanation of the rudiments, embodying definitions of dietetics, food, food accessories, and conditions for perfect nutrition. Next the five food classes, their composition and examples of each, effects of heat upon each, and the use of each class in the body. In sequence are discussed the caloric value of food, chemical and mechanical digestion, digestive aids, points to be observed in the service of food, and preparation of the tray. Under classification of

Fig. 5. The blackboard indicates a fair afternoon's work. Miss Louise Powell, superintendent of nurses (at the right), directs the class in bandaging.

hospital diets she toches upon the liquid, semisolid, light, and general groups. The care of food materials and care of laboratory cover directions for washing dishes, care of sink, care of refrigerator, and care of refuse can. Completing this first lecture are the table of abbreviations, table of measurements, and rules for measuring.

In the second lesson the bluejackets start right off on preparing liquid diet. On the blackboard are the recipes, which the men copy in their note-

Fig. 6. The Class in invalid cookery preparing semisolid diet. They are making cream sauce, cream of tomato soup, and foamy omelet.

books for reference when they arrive at sea duty. During one period I watched the apprentices making peptonized milk, junket, ice cream and sherbet, albuminized lemon, milk shake, eggnog, and coffee. A great many of the sailors courted indigestion in their avidity to "see how it tasted." In their haste, too, to make everything scheduled for that day, the men generally neglected "points to be observed in serving." Miss Thomas' rule is that each student must show her each specimen when he has it ready for the patient. In the laboratory is a china cabinet completely stocked, but the dishes at first seemed to go begging. The coffee was displayed to the instructor in tin cups, the albuminized lemon in measuring beakers.

"Would you serve it to your patient that way?" asked Miss Thomas.

"Yessum," was the glib reply. "A sailor wouldn't know the difference."

Therein outcrops the lack of the essential feminine touch, which a "man nurse" naturally slights. However, the repeated dictum that china cups and saucers must be used in every case soon turned the bluejackets to the employment of "dishes."

The third period completes liquid diet, with such as acid beverages, pasteurized and sterilized milk, buttermilk, tea, cocoa, malted milk, broth, farinaceous beverages and gruels. In semisolid diets, Lesson 4, the men learn cookery of cereals, cream sauce, cream soups, eggs, milk toast, and simple desserts, as gelatine and blanc mange. Light diet proceeds with cookery of meat and vegetables, scraped beef, fish, chops, baked potato, service of green vegetables, baked fruit, and raw fruit. The last lesson, general diet, covers in more detail the service of a tray. Then follow the cooking of, for example, steak, mashed potato, various vegetables, and farinaceous desserts. The men cook wholly independently of one another, each with his own stove, own utensils, and food materials.

In practical nursing a course of ten lessons is given by Miss Vannier and a staff of assistant head nurses at the university hospital. This work is apportioned among the wards, a diet kitchen used for poultice-making, smaller rooms used for sectional classwork, and the operating room, including an adjoining compartment for instruction in sterilizing. So popular was this phase of the training that a large squad of bluejackets preferred to remain in Minneapolis over the Christmas holidays, rather than accept furloughs to their homes on the Pacific coast, in order to receive additional instruction as real surgeons' assistants. They scrubbed up for operations, sterilized gowns and

Fig. 7. In this special diet kitchen each bluejacket makes the poultice for his own patient. As fast as one section finishes, another group comes in to work.

gloves, made sterile dressings and boiled water, administered anesthetics — one by each sailor every day—used stomach pumps, made bladder irrigations, threaded sutures, worked daily in the special diet kitchen, and assisted at operations throughout. Is it any wonder that such honestly energetic bluejackets are with all confidence looking forward to an M. D. degree some day?

The first ward lesson the men receive upon entering the hospital after their month's training exclusively in the medical college itself is in bed-making, with and without the patient. This primary instruction entails also use of the backrest, the cradle, air cushion, pillows, pads and swing. Methods of taking temperature, pulse, and respiration are now taught as well. The drugs is also taught, explained minutely, to every man.

The third lesson in ward management extends to special care of mouth and teeth, washing the hair in bed, treatment for pediculosis, disinfection of excreta and bedding, preparation of specimens, and charting. The latter topic is given, like the hypodermic work, in small classroom sections. Aside from their immediate significance to the doctor or surgeon in charge, charts are discussed as well from the angle of their immense sociologic value.

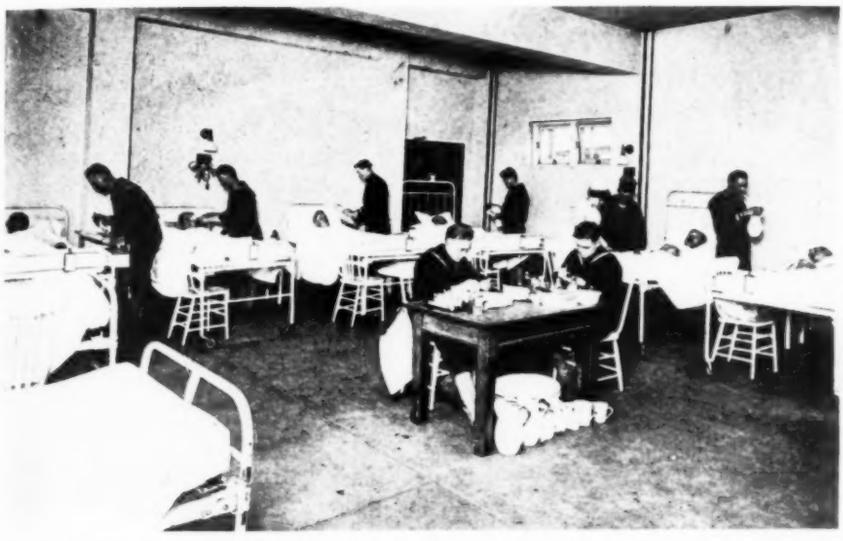

Fig. 8. Stupes, compresses, or poultices are in all cases made by the sailors themselves before application. This ward of the university hospital is devoted daily to instructing the navy men.

The next phase of the training runs into compresses. This general subject involves the application of hot and cold compresses, turpentine stupes, the mustard foot bath, mustard plasters made and applied, and flaxseed poultices, finally the filling and care of hot-water bags and ice caps. As in every lesson, Miss Vannier first demonstrates each detail in the operating room, taking the navy sailors of course practice on convalescents, who, indeed, enjoy the recess—to them a novelty, a rift in monotonous hours—quite as much as the apprentices themselves.

Fig. 9. Miss Mary Vannier, assistant superintendent of nurses, conducting a quiz on instillation of eye drops and irrigation of ear. The men seated are invited to criticize the work of their mates.

Lesson 2 is the bed bath and toilet, special care of the back, preparation for the night, giving of medicines, and computing, preparing and administering hypodermics. For the hypodermic work Miss Vannier takes the bluejackets in sections of five to one of the smaller classrooms, where they are thoroughly drilled in figuring on the blackboard the puzzling problem of, for instance, obtaining one-fiftieth with one-twentieth on hand. Beside the table where the men prepare the injections is a bed occupied by a patient dummy (the word "patient" may be construed ad lib.) which receives in its right arm the varied soporifics. Naturally, under this detail of the training the apprentices are given a full understanding of the circumferences under which a hypodermic may be used. Meticulous care of the needle and the men in two sections of fifty each. At the next period after the demonstration the sailors go to the ward, every man to his patient, and under the direction of a head nurse they show how much they learned from the lecture.

At this stage of the instruction a general oral quiz in the operating room gave an interesting sidelight on the capabilities of the bluejackets thus far. While one man would be answering

a question, another would be alloted a certain task to perform at the bedside of a patient rolled in for the purpose, another would be assigned a problem in hypodermic computation at the blackboard, still another would be given a specific duty with a second patient. The sailors averaged well in their answers, and those uncertain of correctness showed extreme anxiety to say something, at least, rather than admit ignorance.

"What are bedsores?" was one question.

The reply was not prompt. Then, "Why, bedsores are sores the patient gets in bed—bedsores."

Walk in a circle if you have to, thinks the bluejacket, but never say "I don't know" with all your mates sitting around.

Fig. 10. Operation of sterilizers and tanks is learned to the minutest detail. These men, sterilizing dressings, are about ready to "scrub up" to assist at an operation in an adjoining room.

Another question, "What is to be observed about the extremities of a patient newly admitted to the hospital?"

The sailor quizzed had evidenly been deeply impressed by an erstwhile lecture on antisepsis. He answered, "See if they're dirty."

The next lesson, the fifth, covers preparation for operation. This subject of course is subdivided into such essentials as moving and lifting the patient to the stretcher, preparation of the ether bed, Fowler's position, post-operative care, turning and lifting the patient in bed (bolstering with pillows, favoring the weaker side, etc.), and getting the patient up in the chair. During the holidays previously mentioned some of the men had an opportunity actually to perform these care-laden duties.

Then the expression of stomach contents, embracing lavage and gavage, is succeeded by irrigations of eye, ear, nose, and throat, this demonstration concluding with the instillation of drops. The pneumonia jacket and the Priessnitz compress ensue—intensely practical, since in the service many cases of pneumonia can be treated abortively with great success if nipped in the bud by hospital apprentices adept in diagnosis—and the cold sponge to reduce temperature, the cold pack, the hot pack or sweat bath and inhalation.

The group following, ably demonstrated by two of the interns, takes in the various enemas, enteroclysis, catheterization and bladder irrigation, shaving of patient for operation, application of perineal dressings and precautions in the care of venereal cases. The last two lessons reach to preparation for venesection, lumbar puncture, hypodermoclysis, paracentesis of chest and abdomen, application of abdominal binders, then technique for clean and soiled surgical dressings, Buck's extension, use of sandbags, and operation of sterilizers and tanks.

"Now what are the four principal things to note in charting a patient?" one of the sailors was asked at this juncture.

"Temperature, pulse, respiration" (they all remember those three), "and—" he paused ominously, "and the date?"

A mocking laugh, especially loud by the bluejacket sitting next, who volunteered, "I know. Remarks."

"Remarks about what?" quizzed the instructor.

"Why, you must write down on the chart what the patient has to say, so the doctor can read it."

New Occupations for Disabled Soldiers

Putting disabled soldier farmers to work as grain inspectors has been arranged by vocational officers of the military training hospitals commission of Canada, who anticipate in this way solving the problem of caring for disabled farmers returned from the front. To discard their former training on the land and teach these men of the soil an entirely new occupation means that months must elapse before they can be restored to independence, the commission reports, while by utilizing this former training of the farmer-soldier, he can do a big work for the country and become at once economically independent again.

Some men still able to carry on in the lighter phases have been directed to poultry farming and many given special scientific training. Many have taken up tractor engineering in anticipation of the motor age in agriculture; still other occupations chosen are gardening, horticulture, and tree surgery. Grain inspection allows play for a man's technical training, even though in an entirely different field.

We cannot take up life where predecessors left off, but have to rebegin it. The frail philosophies that supported us in youth melt under the sun of experience and plunge us into the cold waters of fact. But the rediscovery of the universe in its special bearing upon oneself is the commencement of effectiveness and, therefore, of happiness.—Stephen Berrien Stanton, "The Hidden Happiness."

A PLACEMENT BUREAU FOR THE HANDICAPPED

Successful Record of the Handicapped Bureau of the State-City Free Labor Exchange of Cincinnati—Character of the Problem—Some Considerations Which Should Guide in the Placement of Handicapped Persons

By RUTH MONTGOMERY JONES, Supervisor of East Central District, Associated Charities, Cincinnati

FOR a number of years it was keenly felt in Cincinnati that special attention should be given to handicapped persons. Medical agencies were attempting to teach those persons disabled by disease to live in such a way that their handicap would be reduced to a minimum. This medical education accomplished little, if suitable employment was not available. The hospital social service and Anti-Tuberculosis League had the painful experience of having numerous cardiac and tuberculous patients return to them for treatment. Through force of circumstances a large proportion of these men and women had been permitted to resume former occupations that had probably produced and would surely aggravate their handicap. Others took the first work that presented itself, when proper vocational guidance and education would have enabled them to give a reasonable number of years of service to the community without injury to themselves or danger to their fellow workmen.

Mr. T. J. Edmonds, secretary of the Associated Charities, conceived the idea of establishing a bureau for the placement of handicapped persons. He had been studying the question from an economic standpoint and had been collecting information from case records of the Associated Charities and other social and medical agencies. He found that a large proportion of families with whom these organizations came in contact had their problem complicated by a physical or mental handicap. Failure to give them special attention at the time when they should readjust themselves to their changed condition was responsible for a great number dropping into the class of social debtors, while others who refused to become dependent struggled in an unfair industrial competition when education and intelligent placement would have made it possible for them to earn a living with much less difficulty.

During the time when Mr. Edmonds was making this social study, he was also collecting data regarding the attitude of employers toward the absorption of handicapped labor, and attempting to determine the type and number of handicapped persons employed and kind of work they were doing. In 1914 this information was given to the Council of Social Agencies, who made report on the subject. They estimated that various social agencies came in contact with about three thousand handicapped persons in one year's time, and that 75 per cent of this number were by nature or through force of circumstances breadwinners; that is, they should be the logical breadwinners, although not at that time providing for their families.

A meeting of various social agencies was called and at this meeting it was decided to inaugurate the work. The State City Labor Exchange was chosen as the most desirable agency from which to make the experiment. However, a period of industrial depression followed, which made it impossible to place even able-bodied men and it did not seem advisable to broach the subject of employment for handicapped persons. In 1916 the increasing demand on American industry brought about by the war so stimulated the labor market that we felt the time propitious to begin the work. Mr. Edmonds drew up the plans for operation, and I was sent with several well-trained volunteers to the State-City Free Labor Exchange to make a medical, industrial, and social investigation preliminary to establishing a handicapped bureau.

We began the work by following up 615 dismissed patients from the General Hospital and Municipal Tuberculosis Sanatorium, whom we presumed to be permanently handicapped, in order to determine their physical and mental and industrial status. Of these, 403 were located and 193, or 47.9 percent, were found to have a working capacity; 40.6 percent were unemployed; 53.4 percent had returned to old occupations; 16 percent had found new jobs.

Of the 615 cases 270 were arrested tuberculosis patients. We located 188, or 66⅔ percent of this number, and obtained information concerning them. Of those not located, 39 had moved away, and we could not trace the remaining 51. Forty-one, or 22.7 percent of those located, had died since dismissal from the hospital. Ninety-six, or 53.3 percent, were unable to work (55 of this number had returned to the hospital). Twenty-eight, or 15.5 percent, were working either at the Municipal Tuberculosis Sanatorium or in new positions. Fifteen had found new positions and 13 had returned to old occupations.

Fifteen, or 8.5 percent, were unable to work but unemployed. Of this number (180) 43, or 24 percent, had a working capacity. This was a

much smaller proportion than found in other handicapped groups, especially the cardiac, of which we found 80 percent employable. Of this group, 32, or 11.8 percent, were diagnosed in hospital records as first stage; 148, or 54.8 percent, in the second stage; 90, or 53.4 percent, in the third stage of disease. Moreover, 68.1 percent were moderate to excessive drinkers, and 48.8 percent had a venereal history; 51.8 percent lived in our worst tenement district.

These cases were followed up by personal visits, hospital Anti-Tuberculosis League, and other clinical records. Those patients not working were requested to report to the bureau, and our cards were left with those working, if we felt their employment unsuitable. A number of these patients have since applied to the bureau for work.

As all patients discharged from the Municipal Tuberculosis Sanatorium are sent to the Anti-Tuberculosis League for future observation, an arrangement was made with this dispensary, when referring cases to us, not only to furnish the bureau with a diagnosis of the case but to send us a form containing special information, such as the man's past occupation, the particular process, other industrial possibilities, length of time he should be permitted to work, under what conditions, and the nature of such work. After work was secured for the patients we requested them to report periodically to the clinic for observation, in order that we might know the effect of the work upon their health. Such information would help us greatly and guide us in the placement of similar patients.

Fig. 1. Interior of shop where several successful placements have been made. Picture shows back of an employee paralyzed in both limbs who was placed in this position by the Handicap Bureau. Without any previous knowledge of the work he has acquired sufficient skill in six months to more than triple his earning capacity. Photograph by Mrs. Alice F. Foster, Cincinnati.

One hundred and fifty employers were visited, and a study of the various operations in twenty-four representative factories was made for the purpose of finding appropriate work for the disabled man. Only 8 percent of these employers refused cooperation. Fifty-two percent offered to apprentice handicapped persons; 19 offered to use them if skilled workmen could be furnished, and the remaining 29 percent felt they could only use them for unskilled work. Such promised cooperation encouraged us to believe that our greatest difficulty would not be with the employer, who, we felt, had manifested unusual interest.

An objection given by about 50 percent of these employers was that a handicapped person is more liable to injury due to his physical limitations, therefore a greater risk, and in the event of accident, their rate of insurance with the Ohio Industrial Commission would be apportionately increased. Of these firms, 41 percent have since employed handicapped persons at our request, and 58 percent of those persons employed (from the last report) were still holding their positions.

There was a greater objection to employing tuberculous persons than any other handicapped class. Even when assured by physicians that the disease was quiescent, employers were loath to give them trial, which is the result of the splendid educational work accomplished by your medical agencies toward eliminating the White Plague. Often tuberculous patients are permitted to work only a portion of the day, or an average of about one-half time. The employer will not consent and cannot afford to give a place to a man working one-half time which could be filled by a man who can work whole time. The effect on other employees of permitting one man to come later or leave earlier, even when the reason is clearly understood, is detrimental to discipline. Concessions made to one workman are nearly always productive of trouble in the management of other employees. Even when we discovered two tuberculous patients experienced in the same process of industry we could not persuade the employer to use them in one position on a half-time basis for each.

On several occasions, after a great deal of effort, we found what we considered ideal places for tuberculous patients, only to have these positions rejected for some reason not given us when the application was made. After prevailing upon one employer to give a small amount of work which he was sending to another concern to a man experienced in that line of work, thus giving him about four hours' work a day, the applicant refused on the score that he thought it would be more advantageous to stay at home and assist his wife with laundry work.

Another young man was placed on a delivery automobile for one of our large department stores. He gave up the position after a few days'

work, as the compensation was smaller than that he had been receiving before handicapped. He had been assured when he took the position that he would receive a substantial increase as soon as he had had more experience, and would later be taught to drive the machine.

Our bureau has received 435 applications of handicapped persons within the last fifteen months, and from this number 58 temporary and 261 permanent placements have been made. These 319 positions were filled by 201 different persons; 218 more positions were procured which applicants refused, that is, definite jobs were promised by employers to particular applicants who either failed to report, took the job and after

Fig. 2. Miss Cora March interviewing an applicant whose duplex handicap rendered him a most difficult employment problem, but who was later successfully placed in clerical work in a large machine shop. Photograph by Mrs. Alice F. Foster, Cincinnati.

working a short time, left, or were dismissed. If this report of placement falls short of your expectation, possibly the following figures may account for what appears a small proportion:

Only 24 percent of our applicants were under 30 years of age; 18.7 percent were between 30 and 40 years; and 57.3 percent were over 50 years of age. Ninety-three, or 30.2 percent, of those from whom we obtained information regarding their educational equipment had less than a fourth-grade education. The next 170, or 56.4, had less than an eighth-grade, and only 14.5 percent had more than the grammar-school education. Only 9.4 percent had been handicapped for less than one year; 13 per cent had been handicapped between one and two years; 21.6 percent over two years, or less than five years; and 56 percent over five years, from childhood, or birth.

Might we not feel this group would be rated low as employable materials? Disabled persons were probably not aware of the existence of our bureau, or only appealed to us for assistance after exhausting other means to find employment.

We placed 80 percent of the recently handicapped men with half the effort spent in placing 30 or 40 percent of those handicapped for a year or more. In handling the crippled applicants referred by the Ohio Industrial Commission, we found it hard and tedious to place a man if he had been receiving compensation for a year or longer. We all know that the chances of industrially reclaiming the disabled man decrease in proportion to the length of time he is allowed to sustain his handicap in idleness.

Much effort can be wasted on poor material, that is, on men who have not worked for so long they have no desire or intention of holding a position. We believe we defeat our purpose and have not the right to sacrifice our future prospects of serving the handicapped by risking the confidence of employers by sending totally inefficient men, even if they will agree to give such men a trial after we have been perfectly frank with them.

The more important part of our task as handicap workers is, by conserving his work habits through useful occupation at the earliest possible time, to prevent the recently handicapped man from acquiring the invalid habit. Fifty-one, or 11.7 percent, of our applicants were tuberculous patients. We feel this is not a very large group from which to make observations or draw conclusions, but our findings may be of interest. Twenty-nine were married, 18 single and 4 widows. Thirteen were women and 28 were men. Forty-nine were white and 2 were colored. Fourteen were between 20 and 30 years of age, 18 between 30 and 40 years of age, 7 between 40 and 50 years of age, and 12 over 50 years of age. Nineteen were diagnosed as first-stage cases, 24 in the second stage, 4 in the third stage, two tuberculous bones and two tuberculous glands. Twenty-nine persons were placed in 41 positions, with an average of $6.90 wage per week for women and $11 per week for men.

We placed these people as watchmen, chauffeurs, drivers, solicitors, collectors, janitors, telephone operators, porters, florists, bill posters, art models in Ohio Mechanics Institute and Art Academy, messengers for the Western Union Telegraph Company, elevator operators, salesmen, artists, light skilled factory work and light outside labor.

Two of these patients have since died and four have returned to the hospital.

One man was placed very successfully as elevator operator in a factory where he did not have to handle freight; the elevator was open and the room well ventilated. Another was placed with a contractor for light outside labor, and had his wages increased from $9 to $12 per week in a very short time. The last report from his employer stated that they were using him in the office and his work was very satisfactory.

Another man with a wife and four small children dependent upon him for support had applied repeatedly to the exchange, which always favored him with most of the off jobs available. Consequently his earnings had been uncertain, and never sufficient to make ends meet. No work had come to the office which he was physically fitted to fill. He had conscientiously endeavored to the best of his ability to do all the work offered him, but his weekly earnings seldom reached more than $8 or $9. He was nearly desperate when referred to the handicap worker. He tried three jobs before one was found which he could hold and still earn a living wage. Finally he was placed with a contractor, as watchman, earning $14 per week. Arrangements were made to send his family to the fresh-air farm for a short time, just relieving him of the household expenses and giving him a chance to get a thorough start. He has held the position for nearly three months. The last report from his employer was that his work was more than satisfactory, his health improved, and he could have the position as long as he cared to keep it.

A great many things must be taken into consideration when placing a tuberculous patient. Each separate factory must be inspected before permitting these patients to accept positions in their employ. The work might be appropriate, but the working conditions might counterbalance everything else.

By making an intensive study of all employment, especially factory operations, we can undoubtedly find enough openings for all employable tuberculous patients. Intelligent placement requires the combined knowledge of social and medical workers and the cooperation of the industrial world. Mass treatment is not advisable, as each patient requires individual attention. Vocational education should proceed placement to get the best results. Unless a tuberculous patient can safely resume his former work, or during the convalescent period can be trained for suitable employment, a handicap bureau must experiment by testing his physical, mental and industrial capacity in several positions. Such repeated placements tax the patience as well as the good will of the industrial world.

Interim employment should be provided for these patients under medical supervision until such time as they can be permitted whole-time employment in the regular processes of industry. A suggested arrangement is a small workshop under business management and medical supervision, equipped with standard machinery, where the man could be educated for future occupation. This small laboratory should represent enough different tasks and industrial operations so that the man may have a selection in his work, and the physician should decide whether he has chosen suitable work. The physician should also regulate the number of hours of employment for each individual patient, and the man should be compensated for his services accordingly. Under business management such an enterprise might be almost if not entirely self-supporting.

All handicapped groups could be trained in this laboratory. In many instances a man's earning capacity may be increased, if a skilled workman is developed out of an unskilled laborer. This is well illustrated in the case of a young man, aged 24, whose lower limbs were paralyzed as a result of locomotor ataxia. Previous to his application at the handicap bureau, he had been braiding leather belts, never earning more than $6 or $7 per week. We prevailed upon an employer in Cincinnati who manufactures an adding machine to give him work. He was placed in the assembling department, assembling the small parts of the machine, and could sit while working. His beginning wage was $12 per week. When I visited him six months later, he had been advanced to $20 per week, and his employer told me he intended to make him a foreman of one department and further increase his wages. This firm has employed twenty handicapped persons since this placement at our request, which leads us to believe that it has found handicapped labor a paying proposition.

Most concerns assured us they had absorbed their own handicapped labor, although it was their experience that a man ceased to be a valuable employee after he became aware of their moral obligations towards him. When employing a man not handicapped in their own employ, the debt was reversed and gratitude and the dreaded difficulty of obtaining another position often made such employees more faithful.

In Cincinnati, Mrs. Edna Mill, present director of our handicap bureau, has an arrangement with the manual training department of our public schools to train all handicapped persons she

sends them and educate them in any line they desire. This work is being developed so that we may be prepared to reeducate the handicapped soldiers when they return.

Have we not every reason to believe that the proportion of younger handicapped persons, which form the most hopeful group and are the most valuable material, will be tremendously increased by the return of our disabled soldiers and sailors, whose handicap caused by war will not be different from that sustained or contracted in times of peace?

The Simons-Alexander bill, now pending in the Senate, provides for the reeducation of disabled soldiers, during which time they will receive compensation equivalent to that given during active service. Let us hope the time is not far distant when similar provision will be made for the reeducation of the industrial handicap and all other groups with compensation. A long period of idleness will have the same pauperizing effect on the military as on the industrially handicapped persons, and the two classes should receive similar treatment and attention.

THE HOSPITAL FIELD IN FIGURES—A SURVEY OF CONDITIONS AS THEY ACTUALLY EXIST

Number and Capacity of Hospitals and How Operated—Hospitals Classified According to Character of Work Done

By H. TUCKER McCLURE, Statistical Department, The Modern Hospital.

WHEN in September, 1913, THE MODERN HOSPITAL made its salutatory bow to the hospital world, some statistics were presented to point out the possibilities of usefulness of such a publication as it purposed to be, and to define to some extent its scope of service. These statistics were taken from the most reliable compilations of hospital information then available, but it was soon discovered by those responsible for the magazine that even these compilations were undependable and very incomplete, and consequently an inadequate representation of the hospital field.

As an instance of the dearth of hospital data of real value at that time, it may be mentioned that several hundred hospitals not then included in any printed list were afterward found to be in existence.

In order to serve all of the hospitals in proportion to the importance of their peculiar relation to the entire field, the publishers of THE MODERN HOSPITAL realized that it was necessary for them to know the field thoroughly. For more than four years, therefore, this magazine has been gathering facts regarding the hospitals and allied institutions of the United States, with the view of compiling and maintaining a complete register of these institutions, with accurate records as to their location, their capacity, the character of service rendered by them, etc. Much of this information has been obtained direct from the hospitals by personal visits of representatives, and through the courtesy of superintendents who have been kind enough to furnish written statements. Practically all of it has been verified, so that it is known to be approximately correct in every particular. To present the result of this work in toto would require an entire volume as large as the regular issue of THE MODERN HOSPITAL, and would burden the reader with much tedious detail. It is believed, however, that a summary of the main outstanding facts will be interesting, especially to those who are taking an active part in the great constructive—or, perhaps, we may more properly say reconstructive—hospital movement of the day.

To begin at the end of the road, as it were, there have been found to be, in the United States and its territorial possessions, 8,654 hospitals, sanatoriums, and allied institutions, having a total capacity of 857,133 patients or inmates. Of these 8,654 hospitals, sanatoriums, and allied institutions, 1,665 are maintained entirely by public funds, and 6,989 are privately controlled. Three thousand one hundred and forty of the private institutions receive pay patients only, and 913 are operated by sisterhoods or brotherhoods of the Roman Catholic Church.

Under the designation of "allied institutions," as mentioned in this survey, are the following, all of which are known or assumed to be maintaining some form of hospital service for their inmates:

	Institutions	Capacity
Homes for children	722	107,588
Homes for aged	692	73,213
Rescue homes (for fallen men and women)	177	12,502
Homes for the deaf and blind	114	14,855
Total	1,705	208,158

Excluding these allied institutions, we have hospitals and sanatoriums proper to the number of 6,949, with accommodations for 648,975 patients. One thousand three hundred and eight of these

are maintained by public funds and 5,641 by private funds.

Classifying the hospitals and sanatoriums according to the character of the cases admitted, the result is as follows:

Class	No. of Institutions	No. of beds
General	4,716	263,815
Surgical	156	3,438
Tuberculosis	488	38,584
Mental and nervous	542	282,937
Children	59	7,081
Maternity	193	8,788
Contagious	164	17,324
Eye, ear, nose, and throat	61	2,211
Industrial	193	6,174
Cripples	37	2,376
Alcohol and drug addictions	82	3,030
Convalescents	50	3,992
Chronic invalids	55	3,459
Penal	75	3,566
Other special hospitals	78	2,200
Total	6,949	648,975

In reference to the foregoing table, it should be noted that the various special classes of institutions comprise only those hospitals and sanatoriums not operated as a part of, or in connection with, any general hospital or general hospital system. The number of beds given for maternity hospitals, for instance, does not include maternity beds in general hospitals. In the case of industrial hospitals it should be borne in mind that this designation applies only to regularly equipped hospitals maintained by private industrial establishments, and does not include dispensaries and first-aid stations maintained by such establishments, and sometimes considered as hospitals.

It is estimated that the average number of hospital beds maintained by the four classes of homes, which have been designated above as "allied institutions," will approximate 10 percent of their total capacity, or 20,816. This sum, added to the number of beds in hospitals and sanatoriums, produces a grand total of 669,791, which represents the part of the population of the country for which hospital beds are available at any one time. Basing our figures on the 1917 estimate of the Census Bureau, which for the United States, all territories included, was 114,201,039, this is one hospital bed for every 170 of population. Subtracting the number of beds in hospitals for mental and nervous diseases and convalescents, there are left 382,862 beds for what may be more appropriately termed hospital cases, or one bed to every 298 of population.

The ratio of hospital beds to population varies, of course, in different sections of the country. In Montana, using the 1917 census estimate, and omitting beds in hospitals for the insane and for convalescents, it is as high as 1 to 135; in Alabama it is as low as 1 to 739. Other states show up as follows:

New York (including New York City)	1 to 193
Massachusetts	1 to 181
New Jersey	1 to 293
Pennsylvania	1 to 254
Virginia	1 to 402
Indiana	1 to 315
Illinois	1 to 277
Kansas	1 to 362
California	1 to 147

Notwithstanding the adverse conditions resulting from the war, there has been a marked increase in hospital facilities in practically all of the states within the last three years.

An interesting aspect of the hospital situation not brought out by any of the figures given above is that, excluding homes and all state and large city institutions for mental and nervous diseases, approximately 69 percent of the total number of hospitals, representing 27 percent of the entire capacity, are institutions having less than 50 beds; and that approximately 85 percent of the total number of hospitals, representing approximately 40 percent of the entire capacity, are institutions having less than 100 beds.

It has been said that statistics may be manipulated to prove anything or nothing, according to the will of him who uses them. In presenting these figures, however, THE MODERN HOSPITAL has no motive but to bring about a clearer understanding of the hospital field as it actually exists, and to shed light on those portions of the field where it is most urgent that development be hastened. If this has been accomplished, the effort is well repaid.

Child Welfare in South Carolina

The December issue of the *Journal of the South Carolina Medical Association* is devoted to child welfare. It is said to be the only special number ever devoted to this subject by any state journal. Dr. E. A. Hines, the editor, who is also a member of the state board of health, became interested in the subject of infant mortality from the southern standpoint and was astonished and dismayed to discover through extensive research the meagerness of the literature bearing on infant mortality in the southern states. He therefore, with the aid of the department of vital statistics of South Carolina made a study of infant mortality with the cause of death and discovered the rate in South Carolina to be, in his own words, "appalling."

The Child Welfare Number of the *Journal of the South Carolina Medical Association* is a very creditable effort to draw attention to this problem, and induce the state to organize a division of child hygiene under a state board of health.

Never leave water dripping within the hearing of the patient.—Marie Robertson, R. N., in The Nurse.

THE CONTAGIOUS WARD OF THE MORRISTOWN MEMORIAL HOSPITAL, MORRISTOWN, N. J.

Problems Presented by Contagious Disease Hospital in Community of Moderate Size—Limitation of Cost During Period When Contagious Cases Are Few

By PALMER AND HORNBOSTEL, Architects, and S. S. GOLDWATER, M.D., Consultant, New York

THE planning of a building for the segregation and care of contagious diseases in a community of moderate size presents many interesting problems. The fluctuating population of such a hospital has inspired numerous attempts to plan "elastic," "flexible," "extensible," and "adjustable" units. The present plan is one more such attempt.

In the planning of a building of this character, one of the principal objects is the limitation of the cost of maintenance during periods or seasons when contagious cases are few. If, for example, it is desired to provide a maximum of forty beds for a community having from twenty to forty thousand inhabitants, the plan should make it easy to put a large part of the building out of commission whenever the number of cases falls to a minimum.

The best results can be obtained by treating the contagious disease unit not as an independent hospital, but as a department of a general hospital. Under these circumstances, the contagious ward can share many of the facilities of the main plant.

The unit which is here presented is part of the Morristown Memorial Hospital, at Morristown, N. J. The building is situated on the grounds of the general hospital, and is set well back from the road and on the brow of a cliff; thus the building and its occupants are removed from any direct contact with the surrounding community. The long axis of the building runs approximately north and south; sun exposure is thus provided for every room.

The largest single ward contains four beds; in addition there are two-bed wards and numerous single rooms. Every patient's room has its lavatory and water-closet, so that bedpan corridor traffic may be entirely eliminated. Each patient's room may be entered either from the terrace, which surrounds the building or from the central corridor.

On admission or discharge, patients pass through the examining or discharge room, both of which open into an auxiliary corridor, which communicates with the three separate or separable sections of the main corridor, and which makes practicable the use of a single administrative center, even if it should be deemed advisable at any time to conduct a double ward service.

The present medical staff proposes that the hospital shall be operated on the "contact theory" of infection, which permits a single, properly trained nursing staff to care for a variety of diseases at the same time. If, however, there should occur an epidemic of a particularly severe type, the patients belonging to the group could be segregated in one section of the building, and all direct contact with the occupants of the remaining parts of the building eliminated. The central corridor is so arranged that the hospital may be operated as a single forty-bed unit, as two units of twenty beds each, as two units of twenty eight and twelve beds, respectively, or as three units of twenty, twelve, and eight beds, respectively.

The admitting room, discharge room, nurses' entry and exit, doctors' entry and exit, supply room, and surgical dressing room communicate with the auxiliary corridor, and have not been duplicated; the utility rooms, diet kitchens, and chart and linen rooms are offshoots of the main

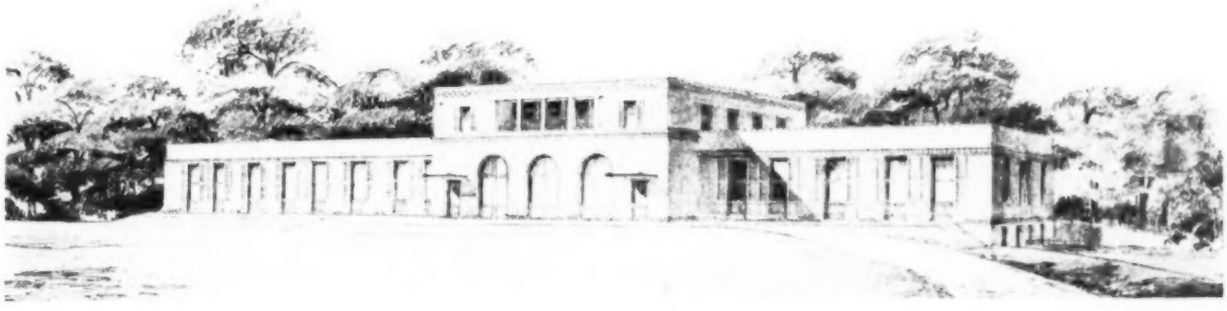

Fig. 1. The new contagious ward of the Morristown Memorial Hospital, Morristown, N. J.

corridor and are duplicated, each arranged to serve one end of the building.

A novel feature is the arrangement of the "door-windows" of patients' rooms. Direct access to the terrace from these rooms was desired. The smaller rooms were too narrow to permit the use of both door and window, and our first impulse was to use a French door, which, while suitable for summer use, is not altogether satisfactory in this climate in winter. As a possible substitute, we next considered the triple sliding sash, which also has its disadvantages during the winter months. Finally we decided to use a double sliding sash for the upper two-thirds of the opening, and, for the lower third, a solid section consisting of two hinged half-doors. This combines the advantages of the wide-open French door in summer and affords the protection of a standard double-hung sash in winter.

Food and laundry service are to be furnished by the main hospital. Food-containers which are returned to the main building will first be sterilized in the diet kitchens. The basement contains both dry and wet sterilizers, the former for mattresses and clothing, the latter for soiled linen, which is to be suitably treated before it is sent over to the central laundry.

While there is an air space beneath the entire first floor, the cellar is fully excavated only where necessary. In the southerly extremity of the building, where the basement is well out of ground, three single rooms have been arranged

Fig. 2. Basement plan of the contagious ward of the Morristown Memorial Hospital, containing servants' rooms, boiler room, storage room, etc.

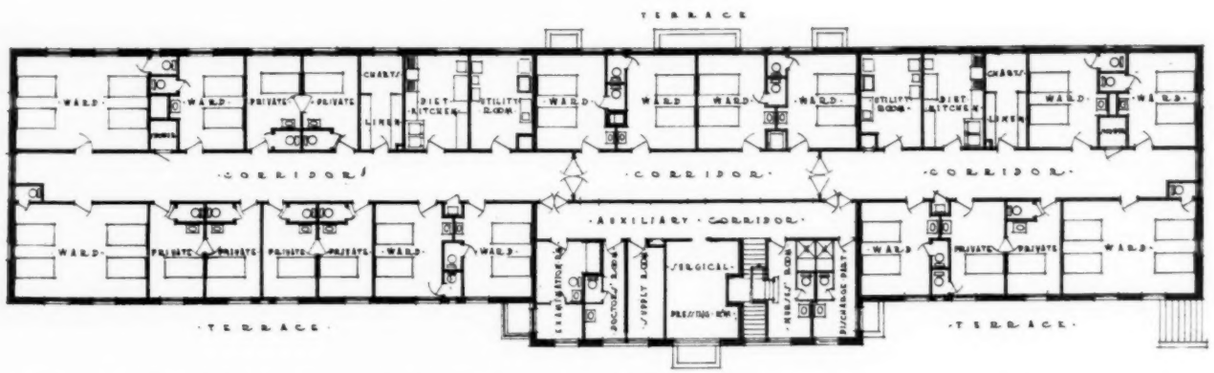

Fig. 3. First floor of the contagious ward of the Morristown Memorial Hospital. Note that the largest ward contains only four beds.

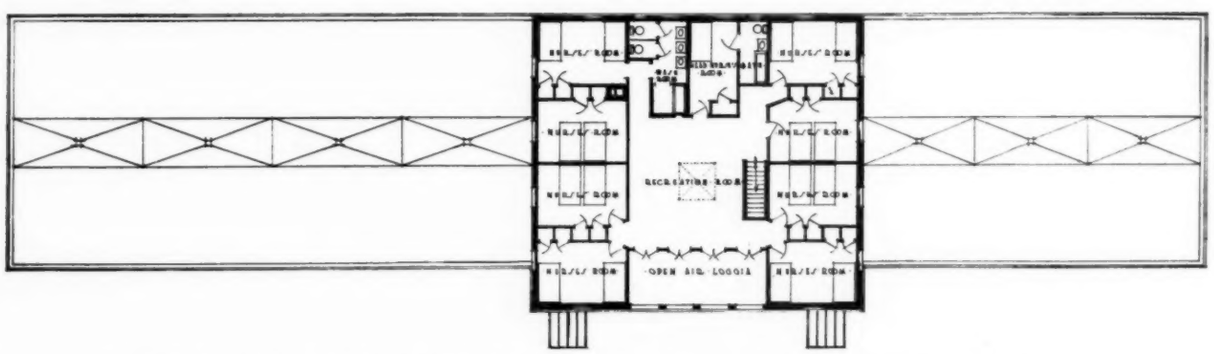

Fig. 4. Second floor of the contagious ward of the Morristown Memorial Hospital, containing the nurses' rooms.

for the servants. In the middle basement are the boiler room, a storage room, a room for the reception of infected material, sections for clean mattresses and patients' clothes, and a morgue.

The second story covers only the central part of the building, and is designed for the use of nurses. It contains eight double rooms, with common bath and toilet, a single room with private bath and toilet for the head nurse, a recreation room, and a sleeping porch. Nurses and others can obtain access to the second floor without entering any infected part of the building; therefore, this floor may, if desired, be used as an annex to the general nurses' home, or for other purposes apart from the contagious service.

The general finish of the building is in keeping with modern hospital practice. In the selection of plumbing fixtures, which are necessarily numerous owing to the character of the service, the choice fell on inexpensive patterns in order to keep down the cost of the building.

The collaborators wish to acknowledge their indebtedness to the medical staff of the Morristown Memorial Hospital and to Dr. George B. Landers, the superintendent, for suggestions and criticisms.

REFRIGERATION FOR INSTITUTIONS

Character of the Problem—Transportation as an Element—Uniform Low Temperature and Dry Air Necessary—The Case for the Refrigerating Machine

By G. H. WHEELER, New Brunswick, N. J.

EVERY large institution has a problem in refrigeration. This problem is more or less difficult to solve in direct proportion to the distance that ice must be hauled, the amount of goods to be stored, and the nature of the supplies to be preserved.

The very nature of an institution for the protection and building up of those who seek its shelter demands ample sunlight, fresh air, and, where possible, quiet. These various requirements make it necessary to avoid the centers of activity where noise is prevalent, sunlight scarce, and pure air at a premium. Consequently, the greater number of institutions are situated on high ground, well out in the country, where Nature's agents may be added to the skill of the medical profession.

This brings us to one of the refrigerating problems—transportation. When goods are hauled from one point to another, someone foots the bill. It may not appear as a direct charge against any particular department, but it is there nevertheless, and must be accounted for in the final analysis. Ice is heavy and hard to handle; consequently the labor item, particularly at this time, is a heavy one. The wear and tear on trucks must also be taken in account, because, if you buy your ice delivered, the selling corporation is adding depreciation on the per pound price; if you haul with you own trucks, the repair bills come out of your own funds. When ice is bought in large quantities, it is figured by the pound or ton. If you buy a ton, they deliver to the truck a certain number of cakes of ice of a certain weight to make the desired ton. This doesn't mean that you receive a ton—it means that you receive a ton, less loss by meltage en route, which during hot, sultry weather is heavy. This percentage ranges from 5 to 15 percent, depending, of course, on whether the truck is open or closed, atmospheric temperature, and time en route.

Where considerable distance separates an institution from its ice supply, uncertainty is another disconcerting factor that must be reckoned with, and this is one obstacle that is often impossible to overcome, because there are so many contributory causes for non-delivery of ice. Delay in delivering may mean loss by spoiling of supplies and interference with the duties of the housemen.

A true adage among market men is, "You must buy well to sell well." The institution must buy well to make a satisfactory showing. To buy well, it is necessary to buy in large quantities, and to be able to snap up first-class goods, when for any reason the prices are below the usual level. Where melting ice is the cooling medium, it is impossible to purchase in large quantities, because the lowest temperature that is obtained in the average ice box is about 45°, which temperature rises as the ice diminishes, until probably 50° is attained before refilling. Even though it were possible constantly to maintain 45°, it would be out of the question to preserve meat successfully for more than a few days, because ice, in returning to a liquid condition, releases a high percentage of moisture, which impinges itself on the walls, floors, ceilings, and contents of the compartment. A moldy condition of the meat soon results. It becomes discolored and spongy, necessitating close trimming before serving. Meat at present prices is entirely too expensive

and valuable a commodity to be trimmed off and thrown out, and, furthermore, the meat beneath the surface, even though not discolored, is far below the proper standard of quality for maximum nourishment and palatability.

Uniformly low temperature and dry air are essential for the proper preservation of perishable foodstuffs for any protracted period. Such conditions are possible only where artificial refrigeration is employed, and it is interesting to note that a large number of institutions are enjoying better refrigeration through the employment of private equipment.

The smaller types of refrigerating machines for many years were hidden from the view of the general public by a haze of misunderstandings and a deal of mystery attached itself to the mechanism that changed rooms into polar retreats, as it were, during the severe heat of mid-August. This apprehension was not surprising, however, because the early ice machines were built in large commercial sizes only and were operated under the watchful eye of an experienced refrigerating engineer. When the smaller units began to appear on the market, the public drew back into its shell, fearing even to consider a piece of mechanism distantly related to the great machines they had seen in ice factories, hotels, etc. The public's lack of enthusiasm was not founded entirely on fear and imagination; in fact, there was an excellent case against some of the early attempts at ice machines, which were liable to perform nearly every mechanical function except that of producing low temperatures. As time went on, the manufacturers began to appreciate the fast-widening field that existed for the small unit, and began to eliminate all parts not absolutely necessary and to bring to a practical working basis plants of small capacity, so that today there are many ice machines ranging in size from half-ton refrigerating effect up per day that are as efficient as the large machines, and so easily operated that the average or below average engineer or houseman can obtain the best possible results without interfering with his usual duties.

The principal perishable supply divisions are meat, dairy products, and vegetables, so that the average institution when installing an ice machine provides for cooling a three compartment refrigerator, one for each of the above-mentioned divisions.

All refrigerating installations begin with the compartments to be cooled. This means that you must first determine the maximum quantity of goods that will be placed in storage and the length of time they will remain there.

The greatest care in designing a plant is necessary to restrain the commissary department from proving exactly why they need a box twice as big as they eventually discover is required.

There are two general types of refrigerators; the one most frequently used is the overhead bunker type. In this case the coils and tanks are placed entirely overhead, the air circulation being induced by sloping the floor of the bunker or coil loft sharply to the rear. This gives swift air circulation, and none of the storage space in the lower part of the refrigerator is interfered with by the cooling coils or tanks.

The other type of refrigerator has the coils and tanks on the side walls. By this means you can get a lower temperature than by the overhead bunker type, but, unless aprons or baffle plates are located in front of the coils, poor air circulation will result and the ceiling and perhaps the side walls are liable to collect moisture by condensation. This is a very unsatisfactory condition and not only is unsightly and nonhygienic, but does not properly preserve foodstuffs.

Many refrigerator linings are available. The majority of refrigerators are lined with spruce, which is odorless and entirely satisfactory for average service. At an additional cost, however, you can have galvanized iron, enameled iron, or opalite glass, the latter being the most expensive and most sanitary, but it has the disadvantage of being in constant danger of cracking from rough handling of pans when storing goods.

The insulation of a refrigerator for a temperature of not lower than 35° should be constructed of approximately four ⅞-inch T. & G. boards, 2-inch thick cork board if obtainable, otherwise 2 inches of granulated cork, and eight layers of waterproof paper. There is no better investment than good insulation, and it would be a comparatively easy matter to point out this fact were it not that cold air is invisible. No one would consider using a boiler that was losing steam at every joint, nor would anyone consider a water tank that continually leaked; yet the very strongest arguments sometimes fail to convince purchasers that good insulation is absolutely necessary for first-class results. Some refrigerator owners will haul ice for miles, pay their workmen to place it in the box, and yet will hesitate to spend a small amount to conserve their refrigerating medium by applying heavy insulations after they have gone to all this time, trouble, and expense to secure it.

The meat compartment of the refrigerator should be provided with galvanized iron, rails, and hooks, with a small number of either gal-

vanized iron or wooden shelves. The vegetable compartment should be provided with heavy shelves in a portion of the compartment; the dairy compartment should have a large number of shelves, the exact number to depend on quantity of material to be stored.

Should actual ice be necessary, either for ice packs or for some other purpose, such as freezing ice cream, etc., the refrigerating system can be hooked up or connected to an ice-making set of the required size, and the ice may be frozen at the same time the refrigerating effect is being secured in the refrigerator.

An ice-making set is a very simple piece of apparatus consisting of a steel tank heavily insulated and provided with what is termed "bridging" for the top of the tank to support the ice cans, which are allowed to extend down into the salt brine which has been placed in the tank. Ammonia coils extend up and down between the rows of cans to secure the cooling effect.

Manufacturing ice merely involves filling the cans with water and removing them when frozen. By having your own ice-making set you are absolutely sure of the source of the water from which the ice is frozen, and your ice supply is always at hand.

The actual refrigerating machine that performs the work of producing low temperatures may be located at any point convenient to your engineer, although it is an advantage to have the shortest possible distance separate the machine from the compartments to be cooled.

A refrigerating machine is a compressor which handles the cooling medium in a gaseous condition, compressing it to a comparatively high pressure, driving it over to a condenser where it is returned once more to the liquid state, ready for re-expansion. The most generally used medium is anhydrous ammonia, because it is easily obtained throughout the country, has a high latent heat, and does not require high pressures (the average being about 160 pounds). Because of the pungent odor a leak can be detected before serious loss of the ammonia has occurred. In the carbonic system oil of peppermint or camphor is frequently put into the refrigerating machine so that any leaks in the carbonic piping may easily be detected.

Second only to anhydrous ammonia, carbonic acid gas (carbon dioxide, CO_2) is the refrigerating medium most frequently employed commercially, because it embodies many of the characteristics necessary for the production of low temperatures on an economical basis.

Carbonic acid gas is cheap, odorless, and easily obtained, but many engineers object to it because of the high pressures necessary for condensation. The average carbonic machine operates with a condensing pressure of approximately 1000 to 1200 pounds per square inch, whereas the ammonia machine operates at a pressure of from only 150 to 175 pounds per square inch. The carbonic machines are of course constructed to withstand this pressure, and, while operating engineers frequently encounter difficulty in maintaining tight stuffing boxes and by loss of the gas, this is generally their own fault, as the stuffing boxes on the carbonic machines have been greatly improved and are now almost perfect.

A refrigerating machine may be operated by any available source of power the cleanest and most convenient being an electric motor, but a large number of plants are operated by gasoline or kerosene engines, or by steam drive.

Many institutions throughout the country have installed their individual refrigerating plants, and their recommendations have convinced many others of their efficiency, which indicates that apparatus of this type is most certainly a paying investment.

To sum up the whole situation, you have better refrigeration, cleaner ice at a decided saving in labor, and the expense of operating a refrigerating plant is in the majority of cases only about 50 percent of the cost of ice.

Hospital Slang

Workers in every trade have their own particular slang to describe their labor and their tools and the common every day views of their working lives. Physicians, interns, and nurses have their own brand of English, and here is the vocabulary that will be familiar to many readers who have spent some of their lives in the hospitals:

Father—Superintendent.
Mother—Superintendent of nurses.
Probe—Probationer.
Middler—Nurse in her second year.
Swipe—The nurse in the operating room who waits on every one and doesn't scrub up.
Lap—A laparotomy operation.
Hypo—Hypodermic injection.
The O. R.—Operating room.
A fast call—Accident or emergency case brought in by ambulance.
O. B. S.—An obstetric case.
Internitis—Affection for interns.
My p. m.—An afternoon off duty.
Doing up a patient—Giving a patient his daily bath and treatment.
Morning glory—Epsom salts.
Bugoleum—A mixture used for pediculosis.

An army of young recruits had been maneuvering all the afternoon, and there had been many brilliant instances of attack and defense in the mimic warfare. At length a white flag was hoisted. The officer in command of the attackers started in amazement. "A flag of truce!" he exclaimed. "What do they want?" A sergeant-major endeavored to cover up a smile. "They say, sir," he reported, "that, as it's tea-time, they'd like to exchange a couple o' privates for a can of condensed milk—if you can afford it!"—Canadian Nurse.

NEW NURSES' HOME FOR MINNEQUA HOSPITAL, PUEBLO, COLO.*

An Attractive Home Built in Spanish Mission Style—Homelike Aspect of the Structure —Social Side of Life Fostered by Recreation and Instruction

By R. W. CORWIN, Chief Surgeon, Minnequa Hospital, Pueblo, Colo.

THE nurses' home for the Minnequa Hospital at Pueblo, Colo., as its name implies, was built in order to give the nurses a real home, and every effort has been made to achieve this result. While the building is extremely simple, within and without, nothing has been omitted in furniture and equipment to make the building an ideal place to live in.

The building was located in the beautiful hospital grounds at some distance from the hospital. It is shaded by fine trees and has a sunny south exposure. One could not find a more delightful site for a residence.

In style, the building is "Spanish" or "Mission." It is two stories high. The wall surfaces are plain and stuccoed in gray, the desire being to relieve the severity of the building with an interesting sky-line and well proportioned masses, rather than with elaborate details. Interesting features are the tower at the entrance, capped with a Moorish dome in plaster, and the rugged outside stairway which leads to the roof of the sun porch and which serves also as a fire-escape.

The living room, on the first floor (28 by 56 feet) has exposure on three sides, the north, east, and south, and from two doors leads to the glazed sun-porch on the east and south. The reception hall is spacious and opens into the living room through a wide arch. These rooms center their interest in the massive fireplace, built to receive six-foot logs. The reception hall and living room are paneled with richly grained fir which has been stained a soft silver gray, and the walls over the paneling are tinted old rose. In planning these semipublic rooms the desire was to open them together, and the sunporch has a polished oak floor continuous with that of the living room. Here dances and entertainments are given. Nothing that might give a homelike and attractive touch has been spared in the way of furnishing. The living room and hall are furnished, for the most part, in silver-gray wicker with upholstery figured in bright colors. For the floor there are oriental rugs.

Fig. 1. The new nurses' home for Minnequa Hospital, Pueblo, Colo., Wil iam White Stickney, architect, a gray stucco building in Spanish Mission style.

*This article is the third in a series of articles on nurses' homes. The first article, which appeared in January, was by Olof Z. Cervin, and was entitled "Nurses' Homes and Some of their Requirements." The second, by C. Happersett and Louis H. Rush, was on the "Kistler Memorial Home for Nurses of Lock Haven Hospital," and appeared in February.

The dormitory quarters have been shut off from the reception room as far as practicable in order that nurses may sleep in quiet at all times. The quarters for the nurses on night duty are particularly protected against noise. All of the bedrooms are large and comfortable, and sufficient in number to accommodate fifty nurses. Each room has a clothes closet, and lavatory with hot and cold running water. The woodwork of all rooms is finished with brown oak stain. The floor is polished, and the walls tinted in soft attractive colors. Each room has a brass or a mahogany bed, an attractive bureau, chairs, and rugs. A feature which has been borrowed from the better-class hotels and clubs is the slat ventilating door.

Fig. 2. First floor of the Minnequa Hospital nurses' home. Note the issolation of the sleeping quarters from the living room.

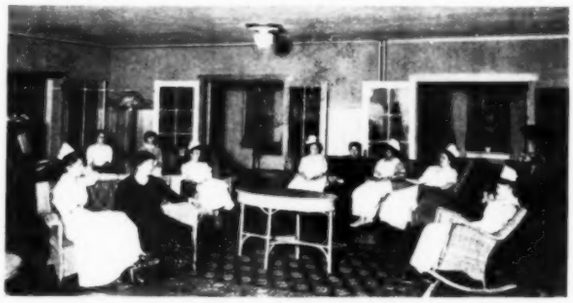

Fig. 3. Living room in the Minnequa Hospital nurses' home, an attractive room finished in silver gray and old rose.

Each room is equipped with this in addition to the solid wooden door, giving privacy and cross-ventilation at the same time.

There are five bathrooms, two on the first floor and three on the second floor. Some of these are equipped with tubs which finish tight to the floor and walls, and others have showers. Each bathroom has a toilet and lavatory, and these have been so arranged as to give privacy for each fixture. All bathrooms are finished in tile, marble, and white enamel paint.

The building is electric-lighted, and heated with a vapor system of steam supplied by the central heating plant of the hospital. In the basement is a large, well-lighted storage room for trunks. Here also are laundry facilities where light laundry may be done.

It is planned to give special attention to the social side of life, and already arrangements have been made for speakers to discuss topics of the day, and for musical and literary entertainments to be given as frequently as is consistent with thorough work.

In the near future, this and all other buildings connected with the hospital will be supplied with filtered water from a central filtering station.

"There is no place like home." This home is no exception to the rule. Already its influence is manifest. Nurses are happier, study harder, laugh louder, and eat more. It may not be out of place to state here that, in addition to the present lecturers, a special teacher has been employed to instruct the nurses in their lessons and work, and this has proved a decided advantage in their training.

You cannot believe in honor until you have achieved it. Better keep yourself clean and bright; you are the window through which you must see the world.—George Bernard Shaw.

Bids have been invited by the Brookville Hospital Association, Brookville, Pa., on the erection of a building for general hospital purposes, estimated to cost $40,000. Accommodations for 40 patients will be provided.

STANDARDIZATION OF HOSPITALS—CLASSES XIV, XV, AND XVI, INSTITUTIONS FOR NERVOUS AND MENTAL DISEASES

Class XVI, State Hospitals for the Insane and Epileptics—Class XV, Private Sanatoriums for Mental and Nervous Diseases—Class XVI, Private Sanatoriums for Patients Addicted to Alcohol and Narcotics

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WE have taken the liberty of grouping Classes XIV, XV, and XVI because the underlying principles in the administration of one will apply to the others. The marks for the classification will be the same in the three cases, and in this discussion we shall try to develop some of the points that must be taken into consideration in the equipment, organization, and the administration of the several classes of institutions for nervous and mental diseases.

It is only within the past twenty-five years that any serious attempt has been made to give more than custodial care to the nervous and mental diseases. Bars and shackles and various physical restraints were formerly the agencies of first importance, and when such patients were sick enough to be consigned to an institution the physician was relegated to the background and the jailor took his place.

Because these patients were usually violent, almost always irresponsible, and hardly ever mentally equipped to protect themselves from abuse, the hospital for the insane and for mental diseases earned a reputation for brutality and cruelty that has persisted in many places even to the present day. The public hospital for the insane was a notorious disgrace to civilization, not only in this country, but throughout the world.

We cannot say whether a new humanitarianism throughout the social fabric has been responsible for radical reformations in the treatment of this class of diseases, or whether the change has been due to the advances in medical science, but it is certain that at this time insanity and the nervous diseases are regarded by enlightened people everywhere in precisely the same way that other physical diseases are regarded. And it is also certain that in state hospitals and in institutions of every sort for the care of mental diseases there is a definite atmosphere that demands not only humane treatment, but an enlightened and scientific effort to get at the cause of the disease and to cure the patient, if that be possible.

Of course, many mistakes are being made due to faulty knowledge of pathology of many of these obscure diseases, but we have at least come to recognize the necessity of having as a part of the equipment of these institutions a very thorough-going pathological department and a trained staff of specialists in these classes of diseases; and, of course, this is a long step toward the study of causes and the application of treatment.

Medical scientists are now bent upon attempts to cure some well-recognized forms of mental disease that only a little while ago were regarded as incurable, and in every respect absolutely hopeless, such, for instance, as dementia precox, regarded until very recently as a progressive and absolutely incurable affection, but now well within the scope of the student of therapeutics.

But as this is not a dissertation upon diseases, but merely an offer of some suggestions by which the institution manager may best care for certain classes of diseases to meet the requirements of medical science, we shall not particularize farther, but discuss somewhat briefly some of the high lights necessary in the consideration of architecture, equipment, and administration.

The old French, German, and English pictures of hospitals for the insane showed great gloomy edifices almost like a modern office block, different only in that they had small, well-barred windows and very thick walls. Sunlight and pure air seemed to mean very little in such institutions as "Bedlam," and the housing and secure custody of the greatest possible number of irresponsibles seems to have been the one uppermost thought.

Thirty years ago there came an epoch in which the small pavilions, spread out over large areas of park, came to the front. Dr. Dewey, of Wisconsin, seems to have been one of the pioneers in demanding small, one-story cozy-looking buildings for the insane. This type of architecture

commended itself to progressive specialists in mental disease because of the possibility of individualizing patients and of getting them out of doors and into the sunshine and fresh air. With this epoch came also the demand for the location of these institutions out in the country, and this demand had too for its object the pure food that might be found in the country—milk, eggs, and fresh vegetables.

The next thought was that perhaps exercise and some consistent profitable occupation might be a good thing for certain types of the mentally diseased, and selected patients were put at little occupations on the farms of these country institutions. The scheme worked out well and a great many patients improved under the out-of-door possibilities and in virtue of physical work.

With this epoch began to recede the demand for physical restraint. Narcotic drugs had already taken their leave, and the bromides, so much in evidence for a hundred years, began to be supplanted by work therapy.

Then came the water cures and various springs, and chemical waters had their day. But patients seemed to do about as well under one class of waters as under another. But the water cures were well defended, great corporations and even governments built institutions around certain springs, and when the public and the medical profession began to lose faith in the specific curative qualities of chemical waters, baths of various sorts were proposed, using, of course, the chemical waters on which so much money had been staked, but then it was found that almost any kind of baths did about as well as those in which chemical waters were used.

It can be easily judged that in this way we were beginning to arrive at some pretty definite standards of treatment for the mentally diseased, even though the pathologist had not given us very much of scientific value upon which to base such treatment, and most of it was purely experimental.

While this evolution in the custodial care and in the treatment of mental and nervous diseases was going on, there were some economic phases that had to be considered. The housing of irresponsibles in small detached buildings where only a few patients could be grouped together was extremely expensive; it required a great many attendants; the difficulties of the food problem came to the front and the other domestic necessities, such as nursing of bed patients and the housekeeping.

Then came a change in the architecture of institutions for the care of these classes of patients, and the hotel type was conceivably possible in the direction of economy and ease of administration. The food problem became easier in that type of construction and the nursing problem, and it was more economical to clean a well-constructed large building than it was to clean a much larger area of isolated small buildings. Medicines could be more quickly distributed and with far greater responsibility, because more centralized. This type of construction was also helped materially toward popularity by being fireproof; the small isolated buildings had never been fireproof, and as they were still supplied with bars and restraints, the dangers of fire were great. Fireproof construction practically eliminated the dangers of fire to these irresponsible classes.

So that today we do not see the reasons for scattering such an institution in the form of one-story buildings over a large area, but we do find it necessary to provide for plenty of sunshine by way of large windows, good elevator service, good ventilation, economical and labor-saving methods of food distribution, and the necessity is emphasized for a class of construction that will permit the economical and perfect cleaning of all parts of the institution. Cleanliness is greatly aided by concrete or composition floors, round bases, hard plaster, and single-panel doors. We are still finding it necessary to continue metal bars, but for the psychological effect, we are obtaining these barred windows by the use of metal window frames with very small spaces for the glass, so that even if a patient broke the glass of a window there would not be space enough for him to get out. There is no doubt that this camouflage is responsible for many quiet patients, who would fret if they found themselves in what they knew to be barred windows.

Some institutions have felt the necessity of continuing a considerable segregation of patients, even when fireproof construction is used, and colonies of various types of patients are planted on different parts of the area within the inclosure. There does not seem to be a very good reason for such segregation, and to our way of thinking, the high, modern building with segregation on the different floors and with easy communication answers every reasonable purpose.

In this block type building an elaborate bath suite and hydrotherapeutic treatment rooms can be centralized and of easy access from any part of the house. The ambulatory patients can be assembled for meals without going out of doors and can be waited upon far more economically; they can also have better food, or at least food served better—the hot things hot and the cold things cold—in such a building. It goes without

saying that patients who must be fed at their beds or in their rooms can be more economically fed and far more satisfactorily than where the food has to be carried outdoors into far-separated buildings.

THE MEDICAL STAFF

If there is any place in modern medicine where group diagnosis is of value, it is in these special classes of diseases. The ground covered under the one heading, "mental and nervous diseases," is tremendous, and even if the cause and the cure could all be focused immediately upon the brain and nervous system, there would still be room for the coordinated abilities of many specialists in such an institution; but where many of these diseases are obviously due to purely physical causes residing elsewhere in the body, it has become absolutely necessary to have the advice and study of specialists in almost every branch of medicine. The case of an epileptic may be purely surgical and remediable by surgical interference; in certain classes the field is that of internal medicine, such as in post-typhoid manias; joint work on the part of the obstetrician and the internist may be necessary in other classes of cases, such as the post-puerperal manias—and so on throughout the whole gamut of these diseases.

Therefore, in creating the medical staff for a state hospital, or for a sanatorium for the nervous and mental diseases, every branch of medicine must be represented, with emphasis, of course, on the department of mental and nervous diseases. The surgeon will always be needed, although he may not have very much to do, and even the dentist has his part to play. So that a proper staff would not differ widely from that of a general hospital, except in the overemphasis of the one department, and to our way of thinking the chief of the department of mental and nervous diseases would be the chief of the staff and all cases would be referred by him to the other departments.

It has always been the rule that these institutions should have superintendents who are very much more medical men than administrators. We think the time is past for this viewpoint, and that the future is to develop the fact that the well-trained hospital administrator will be the ideal man to handle the administrative problems of these hospitals, just as he handles those of the general hospital, leaving the trained alienist and psychiatrist to prosecute the scientific work in his clinical field in a more concentrated and care-free way.

THE PATHOLOGIC DEPARTMENT

If we are arriving at a point where we are really considering the scientific diagnosis and treatment of these classes of cases, it is obvious that the clinician must have access to the services of the up-to-date scientific pathologist, and this department will differ in no respect from that of the well-equipped general hospital. The laboratory equipment will be the same, and the only difference will be that the pathologist will have to give special study to the types about which he is to be consulted. But there is no special pathologist for this type of institution, except that one trained individual will have focused his attention, researches, and study upon that particular type of disease, just as in the surgical hospital the pathologist will have studied more carefully the pathology of neoplasms, etc. We are just now building a school of neuropathologists, or at least developing a school so that it shall have distinct characteristics as compared with the surgical pathologist and the pathologist in other fields.

X-RAY DEPARTMENT

Just as we are developing a distinct neuropathologist by reason of recent researches and the concentration of able men upon the problems in this field, so, too, we are developing a definite neurological x-ray field, and the radiologist in such an institution must work very close to the clinician. Not very many of the distinct nervous and mental types are to be diagnosed by the x-ray, but a good deal of important work is being done in the hypophyseal area, and the radiologist must concentrate his attention upon the clinical findings while he attempts with his fluoroscope or plate to outline variations from the normal. An extraordinarily good x-ray machine will have to be employed if any assistance whatever is to come out of the x-ray laboratory in these institutions, and the head of the department will have to be relied on for the rest.

Other departments do not radically differ from similar departments in general hospitals or institutions of other types.

THE PSYCHOLOGICAL FACTORS IN ADMINISTRATION

Psychology is a tremendous factor in the conduct of any institution for the care of the sick, and we must always think in terms of imagination about patients. But this psychological factor is of even greater importance in the institution for the care of mental and nervous diseases. The first thing that the administrator must think about in the care of a patient is how to make him comfortable and at ease. When we have done

this we have given the doctor the best possible atmosphere in which to do what he can. Every institution of this type is a school for the training of students in psychology, beginning with the chief of the staff and ending with the fireman out in the power plant. Every one has a certain part to play, and in proportion as he or she neglects to think in terms of the psychology of patients, his or her work will be well or badly done.

To tell a nervous or mentally diseased patient that he must do this, or that he cannot do that, is invariably adding to the task of the doctor, and yet it is absolutely necessary that all the administrative factors shall "play up" to the doctor and help him influence the mind of the patient. Mental discipline is one of the chief agents that the doctor employs in the treatment of a mental disease, but the discipline must be so tactfully employed that it will not fret the patient. The clicking of the valve in the float-valve type of radiator may keep a nervous patient awake all night, and may make him very much worse in the morning; the flickering of a light in the hall, through the transom, may do more harm than weeks of properly applied therapeutics can overcome.

The little irritants can become very great impediments in the way of a cure. If a patient cannot have something that he wants, or thinks he wants, it is the business of the nurse or attendant to see that he ceases to want it—not merely to keep him from having it. The maid who comes to clean the room of a private patient can irritate a nervous woman so that the effects will last throughout the day, and the maid, not being a psychologist, would hardly know how to conduct herself in the presence of a nervous patient unless she is taught. A telephone ringing in the hall has been known to set a patient into wildest sort of nervous condition. The patient "just knows" that some one is ringing to tell her that something dreadful has happened at home and the bad news is being kept from her; the patient is prostrated in the morning because her imagination has been at its devilish work all night, whereas if some one, the nurse or attendant, had casually suggested that the noisy ringing was due to the stupidity of the telephone girl, who happened to be looking for the housekeeper, the irritant would have been removed at once.

We are not going into the question of the serving of food to this class of patients. If the patient can have only tea and toast the well-trained nurse or attendant can make even the most unreasonable patient realize that the tea and toast is not only the best ever served, but that it is exactly the sort of thing to insure a good night's rest or to ease a pain that the patient happens to have. Parenthetically, we might suggest that about nine-tenths of the trouble over the food of patients in general hospitals is due to want of psychologic insight and tact on the part of the doctors and nurses. Every effort ought to be made, of course, to see that these patients have attractive food and articles that they like.

WORK THERAPY

There is so much to be said about the occupation, entertainment, and diversion of patients suffering from mental and nervous diseases that one hardly knows where to begin. After all, of course, the doctor must prescribe whatever occupation the patient may have; but very many doctors slight this factor in their treatment of disease and rely on the hospital administrator to look after the patient's welfare in everything except the administration of drugs and any special treatment that he may want administered. The wise administrator will try in every way that he possibly can to develop an atmosphere that has for its prevailing feature the occupation and diversion of his patients. Most medical men are entirely receptive in the matter, and if the administrator will keep on applying his psychology to the doctors, as well as to the patients, he can get his doctors, in a short time, to recognize occupation, entertainment, and diversion as a definite and concrete part of his treatment.

After the doctor has "prescribed" a certain amount of occupation for a given patient, it then becomes the administrator's duty to apply the treatment. If he were to tell the average institutional patient that he had to sweep certain floors or clean a certain number of rugs or spend a certain number of hours helping in the linen room or in the kitchen, he would probably be met with a prompt refusal, and the patient would tell him he was in the institution to be treated for an illness, and not to work. But if the administrator made it quite plain to the patient that the doctor had prescribed a certain amount of exercise for him, and that he, the administrator, was finding difficulty in securing the right sort of work, and then take the patient into his confidence by means of a conference as to what was best to be done about it, in nine cases out of ten he would have that patient suggesting for himself the very thing that the administrator wanted him to do. The way to drive a pig down a lane is to make him think you want him to go the other way.

BOOKKEEPING FOR SMALL HOSPITALS AND ALLIED INSTITUTIONS

Definitions, Rules, Forms, and Examples of Entries in Single and Double Entry Bookkeeping for Small Institutions

By HERBERT K. CARTER and CHARLES A. PORTER, of the Staff of The Modern Hospital.

THE importance of complete and comprehensive records of all the business transactions of a hospital or allied institution is generally recognized and appreciated, but many of the smaller institutions are handicapped in securing such records because they have not in their employ a person who understands the principles of accounting, and in many instances they are without a practical bookkeeper.

Proper records give the executive not only a complete grasp of current business transactions, but a knowledge of the financial condition of his institution, and, when properly kept, furnish a basis for planning future policies. They also act as a legal protection for the superintendents and other executives. Many institutions have suffered financial losses, and a number of executives have been subjected to severe and frequently unjust criticism and embarrassment, through lack of a correct record of transactions.

It is the purpose of this article to explain the simple forms and principles of single and double entry bookkeeping and to give the rules which govern all bookkeeping. The principles are few, but they have a wide variety of applications.

Owing to the complex transactions involved in the business of hospitals and allied institutions, double entry bookkeeping is the best method of recording them. The three principal reasons are: first, because of the element of time which enters into the transactions; second, because there are internal and external checks which guard against error and help to prevent fraud; and, third, to obtain proper statements of the operating cost and standing of the organization in minute detail for comparative purposes.

These statements can best be obtained from a double entry system which shows a complete record of every transaction on both the debit and credit sides of the various accounts. An account is kept with every element of the business, such as personal accounts, supplies, capital, real estate, cash, loans, mortgages, etc.

In double entry bookkeeping for small institutions it will be necessary to keep the following books: Journal, Cash Book, Invoice Book, and Ledger. Larger institutions which have in their employ a person experienced in bookkeeping and accounting practice keep a more complete and detailed record of business transactions, and therefore use a larger number of books and forms. An accounting system for such institutions will appear in later issues of The Modern Hospital.

The following is a list of definitions governing all bookkeeping:

DEFINITIONS

Bookkeeping is a systematic record of business transactions.

The Object of Keeping Books is to enable the executives of an institution to ascertain at any time with ease and certainty any particulars regarding its financial affairs.

A Business Transaction is an exchange of things or services worth money.

There are two systems of bookkeeping—namely, single entry and double entry.

Single Entry Bookkeeping shows only personal accounts in the ledger, and entries are made only when a personal account is affected. It shows assets and liabilities in part only.

Double Entry Bookkeeping gives the assets and liabilities in full, together with gains or losses and their sources. Every transaction necessitates the debiting of one account and crediting of another. Accounts are kept with things as well as people.

An Entry is a record of a business transaction.

An Account is a collection of items appearing under one caption in the ledger.

The two general classes of accounts are *Financial* and *Business.*

Financial Accounts are those relating to money or its equivalent, such as cash, bills receivable, bills payable, personal accounts, etc.

Cash is money, and includes funds in bank. checks, and bank drafts.

Bills Receivable are written promises of payment to the institution.

Bills Payable are written promises of payment by the institution.

Personal Accounts are the accounts of the institution with individuals, firms, or corporations.

A personal account is debited when an individual gets into the debt of the hospital, or the institution liquidates an outstanding obligation.

A personal account is credited when the institution incurs an obligation or an individual liquidates his debt.

Business Accounts deal with *things* other than

cash, such as real estate, equipment, materials, expense, etc.

The Expense Account is an account of convenience, and includes all amounts expended in the operation of the institution.

An Asset is anything of value owned by or owing to the hospital.

Liabilities are debts, and include all that the institution owes.

Debit (*Dr.*) indicates that the person or account with whose name it is connected has become indebted to the institution, or that the institution has liquidated its debt.

Credit (*Cr.*) indicates that the institution is indebted to a person or account, or that the person has liquidated his debt to the institution.

A *Consignor* or *Vendor* is the seller or shipper of goods.

A *Consignee* is the receiver of the goods.

Debit all receipts.

Debit that which costs value.

Credit all disbursements.

Credit that which produces value.

Posting is the act of transferring entries to the ledger.

Journalizing is the act of recording transactions in the journal, or of transferring items in accounts to their closing account in the ledger.

An Original Book of Entry is one in which transactions are first recorded. The books used principally as original books of entry are the Journal, Cash Book, and Pay Roll.

A Trial Balance is a test to ascertain whether the debit and credit sides of the ledger are equal. It does not prove the work to be absolutely correct, as errors may be made which will offset each other, items posted to the wrong account, errors in journalizing, wrong computations, etc.

There are two trial balances—*Trial Balance of Differences* and *Trial Balance of Amounts.*

Trial Balance of Amounts shows a general result, as it contains both sides of the account.

Trial Balance of Differences (Balance of Balances) shows a net result, as it contains only the balances of the different accounts.

A Statement is a written form showing the condition of a person's account.

To Close an Account is to put an end to its current or running condition.

A Balance Sheet is a complete statement showing assets and liabilities, surplus and deficit (gains and losses). It is also called a financial statement.

A Receipt is a written acknowledgment by one receiving money or other property that it has been received.

A Contract is an agreement which creates, transfers, or completes legal obligations. A common intention must be shown.

A Lease is an agreement to rent.

A Collateral Note is one given with stock or other security, empowering the holder to sell if the note is not paid when due.

A Joint Note is one signed by two or more persons.

A Protest is a written statement made by a notary public that a note or draft has been presented by the holder, but payment has been refused.

Bankruptcy or Insolvency is a state of being unable to pay debts.

Solvent is a state of being able to pay debts.

Discount is an allowance for prepayment or prompt payment of a bill or debt.

Trade Discount is a deduction made by wholesale houses and others in trade.

An Invoice is a detailed list of goods bought.

Inventory is an itemized list of articles, with their estimated values.

An Assignment is a transfer by writing, making over to another the whole of any property for the benefit of the creditors.

Capital is money or property of any kind invested in a business or institution.

Stock is the entire value of goods on hand according to the inventory.

For the benefit of private hospitals conducted on a partnership basis, the following definitions are given:

A Partnership is the relationship resulting from an agreement between two or more persons to place their money, effects, labor, and skill, or some or all of them, in some business and to divide profits or bear the losses in a certain proportion. (They may be either limited or general. They are limited when they are formed under a law authorizing such arrangement, and they differ from the general in that in the limited partnership the liabilities of one or more of the partners may be limited, while in the general each partner is liable for all the debts of the firm, even though they exceed his interest in the business. The limited partners are liable only for the amount of their interest.)

Partnerships may be formed either by written contract, oral agreement, or by implication. When there is no agreement showing how the profits and losses are to be divided, they are to be divided equally, even though one partner puts in three times as much capital as the other partner.

Commercial Paper is negotiable paper given

in the course of business. It consists of notes, drafts, and checks.

Negotiable Paper means written evidence of debt which may be transferred by indorsement or delivery, giving the holder the full right to sue and collect it.

Negotiable Paper must be

1. In writing.
2. Properly signed.
3. Negotiable in form.
4. Payable in money.
5. Payable to designated payee.
6. Payable absolutely (there must be no conditions, as, "If I sell my property").

A Note is a written promise signed by a person, promising to pay a certain sum of money at a certain time to a person named, or to his order or to the bearer.

There are two parties to a note—the *Maker* and *Payee*. The maker is the person signing the note, and the payee is the person to whom it is made payable.

A Check is an order addressed to a bank by a depositor, requesting the payment of a specified sum of money to the bearer, or to the person named in the check or to his order.

A Certified Check is a check which has been recognized by the proper officer as a valid appropriation of the amount of money specified to the person named.

A Cashier's Check is one given by the cashier of a bank.

There are three parties to a check — the *Drawer*, the *Payee*, and *Drawee*.

The *Drawer* is the person signing the check.

The *Payee* is the person to whom it is made payable.

The *Drawee* is the bank or firm on whom the check is drawn.

A *Check* should be *presented for payment* on the next business day after being received. If the bank should fail after the check has been received and before being deposited, the holder of the check would be the loser.

A Draft or Bill of Exchange is a written order signed by one person, ordering another person to whom it is directed to pay another a specified sum of money.

There are three parties to a draft (the same as in a check).

There are two kinds of drafts—*Sight* and *Time*.

The *Sight Draft* is payable when presented to the drawee by the payee or his order.

The *Time Draft* is payable ten days after the date it is presented to the drawee by the payee or his order.

The *Drawee accepts* the time draft by writing across the face of the draft, "Accepted....." (date) and signing his name.

An Acceptance is a bill of exchange that has been accepted.

An Indorsement is the writing of one's name on the back of a note, draft, or other written instrument—an implied agreement to pay the same in case the principal debtor fails to do so.

There are three kinds of indorsements—*In Full*, *In Blank*, and *Without Recourse*.

Indorsement in Full.

Pay to John Jones or order.

WILLIAM SCOTT.

Indorsement in Blank.

WILLIAM SCOTT.

Indorsement Without Recourse.

Without recourse.

WILLIAM SCOTT.

Errors are classified as (a) errors of principle, (b) clinical errors, errors of omission, errors of commission, offsetting errors.

DETECTION OF ERRORS IN TRIAL BALANCE

1. Ascertain the exact amount of the error.
2. Review carefully the additions of the trial balance before looking for the error in the ledger or other books.
3. If the number can be divided by 9, there is a transposition of figures (756 may have been entered as 567).
4. Divide by 2 and see if that amount has not been posted to the wrong side of an account.
5. Review the entries from the book or books of original entry.
6. Look for the error systematically.

FIVE IMPORTANT ITEMS IN CLOSING A LEDGER

1. Find the trial balance.
2. Open an account with loss and gain or surplus and deficit.
3. Begin with the first account after the proprietors' and close.
4. If the account be financial, enter the difference between the two sides in red ink upon the smaller side, rule the account, and bring the balance forward in black ink to the opposite side. If it be a business account, add in the inventory (if an asset inventory, add to the *credit* side; if a liability inventory, add to the *debit* side), and enter upon the smaller side (after the inventory has been added) the difference or bal-

ance in red ink, add, rule, and bring down the inventory balance in black ink to the opposite side of the same account, and carry the loss and gain to the opposite side of the loss and gain account.

5. Ascertain the net loss or gain, surplus or deficit, and transfer to the capital accounts.

6. Close the capital or proprietors' account.

TO FIND ERRORS IN CASH ACCOUNT

1. Verify all additions and subtractions on check stub in the ledger account.

2. Find the exact amount of the difference, and look for that amount in the ledger account and on the check stubs.

3. See if you have failed to add the deposits to the bank balance.

CASH BOOK

The following pages show the Cash Book, and give examples of the various entries that will appear in it:

CASH—DR.

Date	Item	Account	Hospital earnings	Miscellaneous
		Balance on hand, carried forward		
	Hospital earnings—sundries	Accounts receivable (proper account)		
	Credit memos	Accounts payable (proper account)		
	Donations and legacies (unrestricted)	Donations and legacies (unrestricted)		
	Donations and legacies (restricted)	General endowment fund and endowed bed fund		
	Income from investments—sale of hospital land and buildings	Income—hospital land and buildings		
	Sale of equipment	Equipment		
	Notes receivable	Notes receivable		
	Interest purchased	Interest		
	Insurance for fire losses	Loss and gain account		
	Miscellaneous			
	Total			
	Balance on hand			

CASH—CR.

Date	Item	Account	Operating expenses	Miscellaneous
	Investments purchased	Bonds		
	Investments purchased	Mortgages, etc		
	Interest purchased	Interest		
	Notes receivable	Notes receivable		
	Mortgages payable paid	Mortgages payable		
	Notes payable	Notes payable		
	Taxes, etc., on investments	Income on investment		
	Petty cash	Expense		
	Accounts payable	Accounts payable (proper account)		
	Insurance	Insurance		
	Equipment	Equipment		
	Equipment	Expense		
	Real estate (hospital)	Hospital land and buildings		
	Periodicals	Expense		
	Salaries and wages (list)	Expense		
	Refunds to patients	Personal account		
	Repairs	Expense		
	Renewals	Expense		
	Interest on notes payable	Interest		
	Sundries	Personal accounts		
	Miscellaneous	Miscellaneous		
	Total			
	Balance on hand			
	Total			

4. See if you have failed to subtract any checks from the balance.

5. See if you have forwarded amounts from one check stub to the next.

6. See if you have omitted a journal entry.

7. See if you have posted an item of some other account to the cash account.

8. See if you have posted some cash item to some other account.

9. Check all items from the beginning.

Discounts. A business house or a hospital should take advantage of all cash discounts. It pays to borrow money to pay bills on which a cash discount is allowed in time to get the discount.

SIMPLE DOUBLE ENTRY BOOKKEEPING

Small institutions should keep at least the following books: Cash Book, Journal, Invoice Book, and Ledger.

The *Cash Book* contains a record of all cash received and paid out.

The *Journal* contains the records, with debits and credits, of all transactions which do not involve the receipt or payment of actual cash.

The *Invoice Book* contains all invoices sent to the institution, showing purchases of materials, supplies, and equipment.

The *Ledger* is used to show the summary of all business transactions.

Before taking up the examples of entries as they appear in the various books, the following general rules of double entry bookkeeping should be carefully studied:

1. For every debit there must be an equal credit.
2. Debit all receipts.
3. Debit that which costs value.
4. Credit all disbursements.
5. Credit that which produces value.
6. Debit interest for its costs.
7. Credit interest for its returns.

PETTY CASH

A Petty Cash fund should be set up for the payment of all small current items, such as postage, expressage, messenger service, etc. To safeguard this fund, a Petty Cash Voucher (Form 11, to be shown later) should be made out and signed by the payee for every payment from this fund. These vouchers should show the items for which the money is expended and the account to which the expenses is chargeable. They should all be totaled at the end of the month, and the totals of the different items entered on the face of the Voucher Envelope (Form 12, to be shown later). A check should be made out at the end of each month, and at such other times as is necessary, to bring this fund up to the required amount.

CHECK BOOK

An ordinary check book may be used for the payment of bills, and each check entered, as made out, in the Cash Book.

JOURNAL

The following examples show the different entries to be made in the Journal:

1

Mortgages receivable	Dr.	$.....	
Investment account concerned	Cr.		$..... ....
Capital account concerned	Cr.		$..... ....
For mortgages receivable received in full or part payment of property sold.			

2

Mortgages receivable	Dr.	$.....	
Bonds	Dr.	$.....	
Other investment accounts	Dr.	$.....	
Loss and gain	Cr.		$..... ....
For value of same, not including accrued interest, given to the hospital. Full details should be recorded.			

3

Mortgages receivable	Dr.	$.....	
Bonds	Dr.	$.....	
Other investment accounts	Dr.	$.....	
General Endowment Fund	Cr.		$..... ....
Endowed Bed Fund	Cr.		$..... ....
Other special funds	Cr.		$..... ....
For value of above, not including accrued interest, given to these funds during the month.			

4

Notes receivable	Dr.	$.....	
To (personal account concerned)	Cr.		$..... ....
Note for (time) (rate) in full or part payment of account.			

5

Notes payable	Dr.	$.....	
Notes receivable	Dr.	$.....	
Notes payable	Cr.		$..... ....
Notes receivable	Cr.		$..... ....

For renewals of notes (give details).

6

Personal account concerned	Dr.	$.....	
Hospital earnings	Cr.		$..... ....

For professional care as per bill No.....

7

Hospital land and buildings	Dr.	$.....	
Equipment	Dr.	$.....	
Capital account	Cr.		$..... ....

Expenditures capitalized during the month. Value of gifts during the month, capitalized.

8

Capital account	Dr.	$.....	
Equipment	Cr.		$..... ....
Real estate (hospital land and buildings)	Cr.		$..... ....

For book value of sales during the month.

9

Capital account	Dr.	$.....	
Hospital land and buildings	Cr.		$..... ....
Equipment	Cr.		$..... ....

For loss by fire or depreciation during the month.

10

Loss and gain	Dr.	$.....	
Personal account receivable concerned	Cr.		$..... ....

For uncollectable accounts received charged off during the month.

11

Loss and gain	Dr.	$.....	
Hospital land and buildings	Cr.		$..... ....
Equipment	Cr.		$..... ....
Real estate—investment accounts	Cr.		$..... ....
Bonds—investment accounts	Cr.		$..... ....
Other investments	Cr.		$..... ....

For losses on sales during the month.

12

Loss and gain	Dr.	$.....	
Hospital land and buildings	Cr.		$..... ....
Equipment	Cr.		$..... ....
Real estate—investments	Cr.		$..... ....
Bonds	Cr.		$..... ....
Other investments	Cr.		$..... ....

For depreciation or losses by fire.

13

Loss and gain	Dr.	$.....	
Notes receivable	Cr.		$..... ....

For uncollectable notes receivable, charged to loss and gain account.

14

Hospital land and buildings	Dr.	$.....	
Equipment	Dr.	$.....	
Real estate—investments	Dr.	$.....	
Bonds	Dr.	$.....	
Other investment accounts	Dr.	$.....	
Loss and gain	Cr.		$..... ....

For profits on sales of these items.

15

Interest	Dr.	$.....	
Loss and gain	Cr.		$..... ....

For accrued interest on donations.

16

Loss and gain	Dr.	$.....	
Interest	Cr.		$..... ....

For the amount of earned interest over costs for the month.

17

Interest ..... Dr. $..... ....
  Loss ..... Cr. $..... ....
  For the excess of costs over returns for the month.

18

Endowed Bed Fund ..... Dr. $..... ....
General Endowment Fund ..... Dr. $..... ....
Other funds ..... Dr. $..... ....
  Loss and gain ..... Cr. $..... ....
  For amounts charged off of these funds during the month owing to the cessation of liability of the hospital.

19

Hospital earnings ..... Dr. $..... ....
  Loss and gain ..... Cr. $..... ....
  For hospital earnings accrued during the month.

20

Hospital earnings ..... Dr. $..... ....
  Overpayments by patients ..... Cr. $..... ....
  For overpayments by patients.

21

Real estate ..... Dr. $..... ....
Bonds ..... Dr. $..... ....
  Loss and gain ..... Cr. $..... ....
  For value of such given to the hospital during the month and not capitalized.

22

Overpayments by patients ..... Dr. $..... ....
  Loss and gain ..... Cr. $..... ....
  Accrued overpayments by patients not refunded and not liable to be claimed.

23

Loss and gain ..... Dr. $..... ....
  Expense ..... Cr. $..... ....
  For transfer of expenses accrued during the month to loss and gain.

24

General material ..... Dr. $..... ....
  Loss and gain ..... Cr. $..... ....
  Surplus amount of material on hand as per an inventory.

25

Loss and gain ..... Dr. $..... ....
  Material ..... Cr. $..... ....
  For loss or depreciation of material during the month as shown by an inventory.

If the business is conducted as a partnership, one of the following final entries will be made:

1

Loss and gain ..... Dr. $..... ....
  Proprietors' accounts ..... Cr. $..... ....
  For the proportionate share of the gains during the month as shown by the loss and gain account.
Proprietors' accounts ..... Dr. $..... ....
  Loss and gain ..... Cr. $..... ....
  For the proportionate shares of the losses incurred during the month as shown by the loss and gain account.

If the business is being begun, an entry should be made in about the following form:

Statement of agreement showing how it is agreed to divide losses and gains and other information.
  Real estate ..... Dr. $..... ....
  Equipment ..... Dr. $..... ....
  Other investments ..... Dr. $..... ....
    Proprietor A ..... Cr. $..... ....
  Real estate ..... Dr. $..... ....
  Equipment ..... Dr. $..... ....
  Other investments ..... Dr. $..... ....
    Proprietor B ..... Cr. $..... ....

[To be continued.]

Hotel Service in the Hospital

After all is said and done, your patient is really a guest in your house, and in one sense a customer, and, although nursing care is the first and most important care he should receive, it is not all that is needed to make him comfortable and to have him go out of your hospital satisfied with what he has been given for the money paid to your cashier.

From the minute a patient enters your front door his hotel service begins. Someone should be there to carry his bags, and take him to his room. Not only should the room be clean with disinfectant and put in order, but walls and furniture should be redecorated often enough to prevent the patient from wanting to turn around to go home again or to another hospital. In this room he should have the things that any good hotel would give him in these days—a reading light, ice water and glasses, desk and writing material, running water, a bathroom if he pays enough and a telephone on his bedside table. Your patient needs good maid service too—that is, his room cleaned and dusted each day without waiting for already overworked nurses to put it in order.

Then there should be someone, an orderly or door-man, whose business it is to see that flowers, before they fade to death, mail and packages reach him when they are delivered, and that someone is available to go around the corner and do an errand for him if he wants it done. And last, but not least, he should have what he wants to eat. The most capable dietitian we know may plan your menus and supervise the serving of food, but if you make hard-and-fast rules that only certain articles of food may be served at given times, you are not going to please your patients—and remember that the finest department stores and hotels have made their success with the motto "The customer is always right."

We realize that ward rates do not pay for a la carte service and that the usual ward patient would not want it, but when your guest is paying from $4 to $8 and more per day, he should have the kind of food he wants, and when he wants it. We believe too, with the Food Administration, that table d'hote meals are a big factor in the waste problem, and that serving meals without any regard for the individual taste is worse in a hospital than it is in an hotel or restaurant, because it takes a mighty attractive meal to tempt a man who is not well, and not exercising to get an appetite. Here is a specific instance:

Mr. B., recently operated on for appendicitis, is not a fussy patient but just an average type of American business man who gets what he likes to eat at home and stays at good hotels when he travels. After the ether and gas pains have done their worst to him, the doctor puts him on a liquid diet and the nurse brings in some dark brown beef broth. Mr. B. doesn't like beef broth, but it is the only broth on the menu for that meal. He takes two sips, gags a little, and the broth is taken back to the diet kitchen and thrown down the sink. A few days later a busy surgeon says, "Put him on a general diet at supper-time," and Mr. B. begins to vision and taste a broiled lamb chop, a pot of good coffee, some head lettuce with French dressing, and a plate of hot toast. The tray comes in with the following, and he is told that it is the general diet menu for supper that evening:

A bowl of wheat cereal.
Two thick slices of bread.
A pot of tea.
A glass dish of canned blackberries.
A slab of cake.
Creamed salmon.

Now the poor victim never could be persuaded to eat cereals, even in his youth, he loathes tea, has stopped eating canned berries long ago, he never eats cake except when his wife makes it, hates salmon, and has no use for creamed things anyway, considers them a mess. The patient nibbles a little and the tray goes back to the diet kitchen, the contents of the dishes to the garbage bucket, and about 8:30 p. m. when a friend comes in, Mr. B. sends him around the corner for a bottle of ginger-ale and a club sandwich.

This specific instance is not an exaggeration, and happens every day. Table d' hote service in the hospital often means dissatisfied patients and unnecessary waste in these times when every ounce of food counts for so much. Good hotel service to our patients certainly plays a large part in our failure or success.

DIAMOND CUTTING FOR CRIPPLES

A New Industry for Legless Soldiers—British Diamond Merchants Trying to Capture Former German Trade

A British diamond merchant, Mr. Bernard Oppenheimer, has initiated a movement to train legless soldiers in diamond-cutting and polishing. Ninety percent of the world's supply of rough diamonds, it is said, come from the British colonies. Formerly they were cut and polished in Belgium, Holland, and Germany. It is the German portion of the trade that the British are trying to secure, and as formerly there were two thousand men in the German Empire employed in this work, there would seem to be a considerable field.

Mr. Oppenheimer and his friends have given £20,000 (about $100,000) toward a school of diamond-cutting and polishing; The DeBeers Company, the largest diamond producers, have contributed £2,500 (about $12,500). The work is not difficult, and it is said to be possible for a man to earn at least $10 or $15 a week within three months after starting. It is hoped that at least two hundred men will be ready for work by the end of the year. Mr. Oppenheimer has bought a site for the first factory, where he will employ from three hundred and fifty to five hundred men, and it is hoped that other merchants will do the same.

The men, it is said, like the new work. Their first practice was on marble, but they learned so rapidly that they were put on diamonds after two or three days. The best workman was formerly a dock laborer. The industry is well suited to legless men. Later Mr. Oppenheimer hopes to be able to take men who have lost the sight of one eye, as only one is required in examining the diamonds.

The world reserves its big prizes for but one thing, and that is initiative. Initiative is doing the thing without being told. Next to doing the thing without being told is doing it when you are told once.—Woman's Magazine.

Bequests under the will of James R. Steers, of New York City, vice-president of Henry Steers Company, Inc., who died in December last, include $10,000 to the Presbyterian Hospital, $10,000 to Sloane Maternity Hospital, and $5,000 each to the Post-Graduate Hospital, Manhattan Eye and Ear Hospital, Women's Hospital, and St. Andrew's Convalescent Hospital for Women and Children, all of New York.

The MODERN HOSPITAL

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Hospital Finances and the War

What effect is the war having on hospital finances? To what conditions may the hospitals look forward?

Thus far there has been no appreciable alteration of income in consequence of the war; on the other hand, expenditures have increased enormously. To offset increased expenditure, many hospitals have very properly readjusted their charges to private patients. In addition, many institutions report increased collections from ward patients, due less to advance in rates than to more searching inquiry into the ability of such patients to pay, and perhaps to greater regularity of employment among the industrial classes.

Increased income has been due, also, in part, to increased allowances by municipalities for the support of patients classified as public charges. For example, New York City has granted a per capita per diem allowance for 1918, which is 20 percent greater than the rate allowed in 1917; elsewhere similar allowances have been increased from 10 to 50 percent. While these increased allowances have been sought and are welcomed by the hospitals affected, they are not regarded as wholly satisfactory, because the rates of compensation previously allowed were far below the actual cost of maintenance. There remains, therefore, a wide margin between cost and compensation notwithstanding the increases recently granted. Private hospitals which are engaged in the care of public patients are insisting more and more that the work done by them for the municipalities should be compensated on the basis of actual cost.

The "actual cost" for which American hospitals are now contending is a sum sufficient to cover current expenditures for maintenance, excluding interest on capital, and, of course, including no allowance whatever for medical service, which is commonly rendered gratuitously and ungrudgingly. Whether "actual cost" will eventually be held to include such items as interest on the capital invested and, in addition, a fair return to the physician or surgeon, is a question for future determination. It is noteworthy that in England where, until recently, voluntary hospitals generally spurned all suggestions of state aid, there has sprung up an insistent demand that the rates now paid by the government and willingly accepted by the hospitals for the care of military patients, be made liberal enough to cover all proper charges, including just compensation to the attending physician.

Apart from relief from governmental sources, what forms of financial relief may hospitals expect? Donations will probably continue notwithstanding war taxes, but donations are not likely to grow as rapidly as expeenditures for labor and supplies. The experience of the great English hospitals during 1915 (the second year of the war for England) is interesting in this connection. According to Burdett's "Hospitals and Charities," the total expenditure of thirty-one general hospitals with medical schools in 1915 was £1,428,863 as compared with £1,488,429 in 1914; the income of these hospitals was £1,451,354 in 1915 as against £1,546,678 in 1914. The total expenditure of seventy-five general hospitals without medical schools was £867,404 in 1915 as compared with £815,570 in 1914; the income of these seventy-five hospitals amounted to £936,905 in 1915 as compared with £856,784 in 1914. The "special" hospitals are classified separately. The expenditure of fifty-nine "special" hospitals in Great Britain was £605,639 in 1915 as against £625,156 in 1914. The income credited to this group was £643,725 in 1915 as against £665,693 in 1914.

The figures just given represent total expenditures on both current and capital accounts; the stated income represents income from all sources. An analysis of the income returns shows a slight falling off in annual subscriptions and donations, balanced, however, by a considerable increase under the head of "patients' payments," an item which was small in most voluntary hospitals in Great Britain just prior to the war, and almost

negligible a few years earlier, before the passage of the national insurance act. In 1914, patients' payments in the general hospitals amounted to only £45,554; in 1915, this item had increased more than seven-fold, reaching the very respectable figure of £357,967, most of the increasee being due to payments received from the Admiralty and War Offices in respect of the treatment of naval and military patients.

Huge sums have been raised in the United States for military and civilian war relief; in the foreground stands the hundred-million-dollar fund of the American Red Cross. Although these sums were not specifically subscribed for the purpose of aiding civil hospitals, the question may well be raised whether part of this money cannot be made available for hospital uses; the hospitals of Boston appear to think that it should be. The Boston Committee on Hygiene, Medicine, and Sanitation, addressing the local chapter of the American Red Cross, says: "In order that the facilities of the hospitals and dispensaries for the general population be not diminished during the period of the war, and in order not to have the dependents of soldiers and sailors become charity cases, it is proposed that the Red Cross should see that. either by the use of government allotments and allowances, or by its own supplementary aid, the usual fees are paid for the services rendered to dependents of soldiers and sailors when cared for in hospitals and dispensaries."

The general outlook appears to be that donations will not suffer appreciable diminution during the war; that expenditures, which have already increased greatly, will increase still more; that hospital earnings will increase, owing to an adjustment of private rates and to greater frequency of payment by ward patients; and that payments from governmental sources by way of compensation for the treatment of public charges, both civil and military, will increase. I predict considerable payments with respect to the treatment of military patients in civil hospitals, notwithstanding the declared policy of the government, which is to provide for the care of soldiers and sailors in military establishments whenever possible, and to utilize civil hospitals only in emergencies. "Emergencies," I believe, will become more and more numerous with the progress of the war, and this is said without any intention of reflecting upon the vigor or efficiency of the medical department of either the army or the navy, or upon the comprehensiveness of the government's hospital program. The civil hospitals have something to give, and the government will not, in the long run, refuse to take it; and what the government takes it will pay for.

Whether legacies and bequests to hospitals are to be adversely affected by the unprecedented and somewhat staggering income and inheritance taxes remains to be seen. Posthumous gifts are applied, as a rule, to the increase of invested funds or to the erection of new buildings. Hospital construction for the time being is almost at a standstill, and there is but little likelihood of its early resumption. A diminution of gifts for this purpose would not, for some time to come, be seriously felt, since there is no strong desire to undertake additions to plants at a time when it is is so difficult to provide for the upkeep of buildings already erected. If considerable sums of money should be acquired in the near future for building purposes, whether by legacies, bequests, or donations, such sums will be put aside to be expended at a time when a dollar will buy more steel and bricks and labor than it will buy today.

Perhaps, when the war is over, there will be an entirely new deal in the whole sphere of health administration, hospital administration included; in that event it is conceivable that boards of trustees who have undertaken the financial upkeep of voluntary hospitals will have less to worry about than they have today. The government is assuming the widest and fullest responsibility for the medical care of the soldier, whose contribution to the war is obviously essential to the safety and welfare of the nation; before long the government may come to recognize that the industrial worker is equally valuable, and in that case it is conceivable that the government, national or state, will assume responsibility for the care of the industrial worker, and of his dependents as well.

S. S. GOLDWATER.

Hospital Costs and Building—A Safe and Sane View

"To build or not to build" is a question that is vexing many boards of trustees and communities at present. The impression seems to prevail in many quarters that the erection of new hospitals or the extension of those already existing should be deferred until after the war. The decision to forego needed hospital facilities has such a serious and important bearing on the health of the community that we have asked Mr. Richard E. Schmidt, the hospital architect, who has made a special study of this question of building costs, to give us his views on the subject. We regard the statement which Mr. Schmidt has kindly prepared as so illuminating that we are presenting it in full.

"The belief that the cost of hospitals built at present

prices is very much higher than the cost of similar buildings prior to the great war is no doubt due to the tremendous increase in the prices of many commodities with which hospital trustees and managers have become familiar, to their great discomfiture and embarrassment, in the purchase of articles required in the conduct of their hospitals. Since 1914, wheat has advanced 93 percent, paper 82 percent, feed 83 percent, coal 115 percent, woolens, lard, canned goods, and pork 100 percent, corn 186 percent, and so on to the 500 percent advance in some of the necessary drugs, whereas building supplies average an increase of about 30 percent.

"That these advances in building material can be discounted by the architect who is expert in hospital design and who knows where economy can be obtained by using suitable materials of the lowest cost and limiting the quantities of all the material to a minimum, without detracting from the efficiency of the building, is evidenced by the cost of buildings built in 1912-1913 and proposals which have recently been received on the plans and specifications for several new buildings. They are as follows:

"One $200,000 complete new building without power house, contracted for in 1912, 31.6 cents per cubic foot.

"One $100,000 complete new building without power house, contracted for in 1918, 36.3 cents per cubic foot, an increase of 15 percent.

"One hospital, complete, including power house, contracted for in 1914, 31 cents per cubic foot.

"A hospital of similar size and arrangement, contracted for late in 1917, is costing 36.9 cents per cubic foot, which is an increase of 19 percent, but the increase could have been reduced to 15 or 16 percent if the owners had consented to a substitution of cheaper materials for a part of the steel trim and tile floors, which are to be used throughout the building.

"A first-class apartment house, built in 1911, cost 19.45 cents per cubic foot. A similar apartment house, which returns higher rentals but is not located so well, built late in 1917, cost 22.3 cents per cubic foot, an increase of 15 percent. The one built in 1917 is fully as good in quality as the former and equal to it in appearance.

"The firm of architects which furnished the quoted figures built hospitals without power houses, in 1911 to 1914, at costs ranging from 27 to 43 cents per cubic foot, proving that unit costs varied over a wide range before the war; that some hospitals cost more per cubic foot than others are costing today, and that the difficulties occasioned by the site in the delivery of materials, uneconomical height, occupation of irregular-shaped property, and the selection of expensive materials to satisfy taste or fancy are factors in cost more important than the increased cost of building supplies.

"New methods of building construction are now available which reduce the quantities of material, using them in shapes where maximum efficiency is obtained with a resulting economy not only of the materials themselves but also in transport costs and labor of handling and placing.

"The result of unemployment in the building industry is causing contractors to figure closer and to reduce their percentage of profit to maintain their organizations.

"There is very little likelihood that prices will be reduced for many years; they certainly will remain as high as they are while the war lasts, and will increase when the enormous demand for materials and rebuilding begins again abroad.

"Any man can easily verify the fact that prices never fell to the level which prevailed before the Civil War and that this occurred after every war in modern history. Labor is better paid than it has been at any time, and the prevailing value of the dollar has fallen. All industries, and hospitals as well, must conduct their business on the new basis so that the thinking and cautious man will not waste much time thinking about the increased cost of building as compared to the 50 and 300 percent increase in nearly all other commodities, but will seek to secure the benefit derived from immediate action."

As we have remarked previously in these columns, hospitals for the civilian population are not less but more necessary during the war, because, since such large numbers of physicians have been called into the national service, it is the more imperative to use to the best advantage the services of those who remain. Hospital facilities, in short, are a war-time economy in the broad view. Even in the narrow view which regards only the cubic foot cost, as Mr. Schmidt's careful study shows, it is likely to be expensive to defer building until the close of the war. We commend his figures and conclusions to the consideration of trustees and others who are debating the question of building now or later.

The War and the Hospitals

We have been asked a number of times how the war and preparations for the war are going to affect civil hospitals. We presume this inquiry has generally meant what part are the civil hospitals to take in the war and in the preparations for war.

The inquiry is most pertinent, and, although we have discussed in a fragmentary way some of the factors that enter into the problem, we think there is need for some further discussion. It has been announced by the Surgeon-General of the Army that the civil hospitals are not to be called on to care for injured and sick soldiers except in such an emergency as is not now anticipated, as, for instance, a greater number of sick or injured soldiers than the War Department could take care of in its own institutions.

We feel that the War Department is entirely justified in taking this attitude; we believe it would have been a mistake to provide for the sending of injured and sick from the war into civil hospitals.

The sick and wounded soldier is still a soldier who is in the pay of the government, and, if he gets entirely well and gets well promptly, he becomes again a part of the fighting forces. How is the War Department to assure itself of his prompt and permanent cure if it turns him over to a civil hospital somewhere whose medical men are not under its control, who are usually not selected by reason of their medical or surgical qualifications, who have not always the viewpoint of the army surgeon or physician, and who do not at all appreciate the army's need to get its men back on

the fighting list in fit physical condition and as promptly as may be?

The wounded soldier, if he is too badly hurt to be recovered for active service again, has to be disposed of in some way. How is the War Department to dispose of him effectively and efficiently if he has gone from under its control? Who is to say when this sick soldier is ready to go back to the front? Who is to say if he is permanently disabled and no longer to be counted on as a part of the fighting forces? Obviously, it must be someone who has authority and responsibility, and who has intimate knowledge of all the factors that enter into the problem of sending the convalesced soldier back to the fighting line. Then, again, the soldier may be incapacitated for life and may be entitled to a pension or to the privileges of the war insurance, and who is to determine these facts? The treatment of a case may, and certainly will, have very much to do with its cure; the War Department may not always have the very best men in the profession at its call, but certainly the government has taken every precaution to call into the service the best men there are in the various branches of medicine. These men will have been trained in military methods of procedure, and they will know exactly what the government's policies and plans are. As a broad rule, the soldier under the care of a military surgeon will get better treatment than he will in the average hospital and under the care of the average staff physician.

Then, there are the papers to make out. The civilian doctor does not know how to make out these papers and is disinclined to learn. The military surgeon knows exactly what it required, and will send the incapacitated soldier back to civil life with his papers in such shape that there will be no difficulty in fixing his status and in giving him the benefits of everything to which he may be entitled.

These are some of the reasons why the War Department must have absolute control of every hospital in which its wounded or sick soldiers are to be cared for.

But there are many things the civil hospital can do and will have to do as its share in this war. Every soldier that goes out to fight leaves behind him relatives or dependents, and these must be taken care of when they are sick; indeed, the whole civil population must become a charge upon the civil hospitals while this war goes on. There are young men who need some slight surgical operation to fit them for their places in the ranks. There are still younger men, boys, who must be brought up to the draft age in good physical condition, and the hospital in a community is in large measure responsible for the inculcation of the principles of hygiene and sanitation and decent living, so that these boys will have the best chance possible to bring them to the soldier age fit for admission to the army. There is the wife of the soldier who is to give birth to a new baby, and the soldier out in the front, fighting our fight, must know that his wife is to have the best possible attention at this critical time in her life. The civilian hospital must be his reliance for this.

And so we might enumerate the broad service that the civil hospital is to give to the country and to dependents of every class while the heads of families and the bread-winners are away doing a man's part to make this country "safe for democracy."

There are some of us who must go to the fighting front in this war; in action and under the spur of the martial uniform, the bands, the guns, and with the goal for which the soldier yearns, these men will give the best that is in them, and even their lives, for the country. Too many of us have no place at the fighting front, but we can be just as brave as the soldier. We can give the best service that is in us, and we can do just as much for our country back here at home. The soldier is making vast sacrifices; we too can make sacrifices, and we of the medical profession and we of the hospital world have our parts to play in the fearful drama of our time, and we can do our duty with as much heroism as the man who dies in front of his trench.

Medical Men in Training

Nearly fifteen thousand medical men, most of them young and nearly all connected with hospitals in one capacity or another, are now in military training camps, cantonments, and with troops in the field, to be fitted for military service in the war. These are the men who are to be the leaders in the medical profession of the next generation. Nearly all of them are back at the very first principles of education and training. Many of them are under grizzled campaigners of the regular army, men who obey their superiors without question, and who expect the same obedience from those under them.

Out in the training camps these men are occupying barracks; their insignia of rank are put away; they sweep out, clean up the premises about the camps, scrub and oil the floors, make beds, and do all the menial duties of the orderly, or the domestic—or the pupil nurse. They practice "setting up" exercises; drill in squads, platoons, companies, and battalions; practice equestrianism—that is, cavalry movements and riding. They answer reveille at 5:30 o'clock on these cold winter morn-

ings, make the fires in their own barracks, and until "taps" at 9:30 p. m. they have never a single minute they can call their own.

After their days of training are over they will go to the war, where the slaughter of men is dull routine and where discipline regulates even their heart beats. What is all this to mean to the hospitals of this country and to the public when the great "muster out" comes and the profession comes home again, forsaking the sword to take up the plow?

We have been a terribly pampered and luxury loving people. Our young doctors have been taught to expect service from others—what, when they are trained to serve, when discipline is their second nature, and when "orders" are a fetish? In that day the standardization of hospitals will be automatic; rules will have the force of "orders," and "service" will be the apotheosis of medicine. In that day we shall know that the war has been worth all it has cost. And this same experience, with like results, will have saturated every stratum of society, every trade and profession, and every living soul of us. And we shall be a century ahead.

The Hospital Door Open to Venereal Diseases

We are in receipt of a communication from Dr. J. M. Baldy, of the Bureau of Medical Education and Licensure of Pennsylvania, telling of what that state is doing of its share in the prevention and control of venereal diseases.

The Bureau of Medical Education and Licensure has sent to the hospitals in the state approved for internship the following communication:

"Venereal diseases are one of the great menaces to the health and social welfare of a community. Patients suffering from these are among the first to apply for treatment to a young physician entering into practice; consequently there is no single class of cases in which the intern should receive more careful instructon. Without justifiable reason such cases are routinely refused admission to hospitals. This refusal is particularly unwarranted in hospitals receiving state aid or receiving the approval of the state for the privilege of giving the fifth year of education to interns. All such hospitals should make immediate provision, under the direction of their medical and surgical staff, for the admission of venereal cases, of cases of purulent ophthalmia and cases of vaginitis in children. The coming reinspection will note compliance with these suggestions."

This bulletin was issued January 1, 1917. After war was declared, following the plea sent out by the medical section of the Council of National Defense and the Committee of Public Safety for the Commonwealth, a resolution introduced by Dr. John A. McLean of Philadelphia was adopted by the House of Delegates that the bureau take action to secure the admission of venereal diseases to the hospitals of the state.

The Bureau of Medical Education and Licensure then issued, in conjunction with the State Board of Charities, the following letter to the hospitals of the state:

"In view of the fact that we are engaged in war, which, by virtue of the spread of venereal infections, has always involved the greatest danger to the efficiencies of armies as well as to the wellbeing of civil communities, and in view of the fact that our national government is now making strenuous efforts to control the prevention and spread of all infectious diseases and thereby conserve the resources of the nation, it is essential that proper provision be made for the treatment of this class of patients.

"It is urgently important that all general hospitals in the state shall make provision for the reception and treatment of this class of patients, and we therefore recommend that:

"Every hospital shall make preparation and provide equipment for the admission of patients afflicted with venereal diseases, and shall strike from their present by-laws or rules any regulation which forbids such admission.

"Hospitals which maintain dispensaries, but have no separate venereal department, are strongly urged to establish such department under the charge of a genito-urinary specialist.

"Provision should also be made by such hospitals for admission for treatment of cases of this character as cannot properly be cared for in the dispensary.

"It is requested that this matter be brought promptly to the attention of the board of managers of your institution and if it has not already been done, that action in line with the above recommendations be taken.

"It is further requested that notification of the attitude of your hospital towards this matter be promptly reported to the State Board of Public Charities, in order that this board and the Bureau of Medical Education and Licensure may have the definite information for their files."

From the fact that the replies received indicated that practically all hospitals of standing in the state were willing to take the proper measures, the bureau felt warranted in using such methods of compulsion as lay within its power. Therefore, after a very careful survey of the field, the bureau adopted resolutions notifying the hospitals that failure to comply with this request will result in the elimination of the name of such hospital from the approved list for internship in January, 1918.

The foregoing communications were sent to 186 hospitals, of which 156 have professed complete compliance with the bureau's request. A distinct refusal has been received from but one. Dr. Baldy says:

"Taking it all in all, Pennsylvania has succeeded in eliminating from its hospital system the old prejudice against the treatment of venereal diseases, which fact opens a new era in the treatment and control of this group. Institutions which before this time have had by-laws or rules prohibiting the admission of such cases now have organized departments in charge of a genito-urinary specialist and a special ward for the house treatment. . . . The bureau is firmly convinced that any state board which will vigorously and fairly take hold of this proposition can accomplish equal results in their own state, and it further believes that the greatest difficulty in the reform of all hospitals lies not so much with the management as with the medical men."

Coloring Oleomargarine—A Warning

Investigation has shown that a number of hospitals are coloring oleomargarine for use on their tables. We feel it a duty, therefore, to call attention to the provision of the United States Internal Revenue Regulations that any person who adds artificial coloring to oleomargarine except for his own family table, shall be held to be a manufacturer within the meaning of the act and subject to the penalties therein provided. Further, it is expressly stated that the head of an asylum, hospital, soldiers' home, or other public institution is not the head of the family within the meaning of the act. Wilful violation of the act would subject the institution in question to criminal action. Even if the violation occurred through ignorance, the institution would be compelled to take out a manufacturer's license from the first of the month in which the violation discovered occurred until June 30 following, paying 50 percent penalty for not having a license, or at the rate of $75 a month; it would also have to pay a tax of 10 cents a pound on all oleomargarine colored.

THE HOSPITAL CARE OF CONTAGIOUS DISEASES*

Principles of Aseptic Technic — Method of Changing Nurses' Uniforms—Care of Food, Dishes, etc.

BY LUCILE A. BUTLER, AND VIRGINIA RAU, NURSE CORPS, UNITED STATES NAVY.

The study of contagious technic as carried on by some of our leading hospitals of today is very interesting and profitable. After spending some time in one of these hospitals one comes to the conclusion that there is a way to care for people afflicted with a contagious disease without danger to the community or to the nurse; also that it is unnecessary to isolate those in attendance upon them as has been done heretofore.

It has been proved without a doubt by those who have made a careful study of contagious diseases that they are transmitted by contact and are not air-borne, as was formerly supposed. The contact may be direct or indirect—direct when there is actual contact with the patient and indirect when there is contact with a contaminated carrier. Anything that comes in contact with a patient, directly or indirectly, is contaminated and should be considered dangerous.

In order that time and labor may be saved when caring for these patients, it is necessary to divide them into units. A unit is an area which represents a separate and distinct infection. It may comprise a single bed or an entire room.

In caring for these different units it is necessary to use aseptic technic, the object being to confine the infection to one unit. In carrying out the medical asepsis one must remember that he is protecting himself from the patient, whereas in surgical technic the object is directly the opposite. The carrying out of the technic, however, is practically the same.

Each new admission is usually under observation for one week and is placarded "Detention," either bed or door detention, depending upon how many other units occupy the same room. Another placard, "Barrier," denotes that there is a question of diagnosis, or that other patients suffering from a different disease are being treated in the same ward. If after the detention period there is no question about their diagnosis patients may be transferred to a large convalescent room.

Corridors, kitchen, operating room, and, as a rule, one utility room are kept free from contamination.

The nurses wear short-sleeved uniforms with the skirts about 5 inches from the floor. The school cap is also worn. Large gowns are worn by the doctors and nurses only when they come in intimate contact with the patients. The sleeves of the gowns extend down to the wrists where they are confined by elastic bands.

Before the nurses enter the wards they proceed to a dressing room, where each nurse has two lockers; one is marked "House uniform" and the other is marked "Ward uniform." The ward uniform is put on and the nurse is ready to go to her ward. When going off duty the ward uniform is exchanged for the house uniform, first washing the hands before touching the house uniform.

The patients' rooms contain a bed, bedside table, and chair, these constituting the actual areas infected. When the patient is discharged the bed, chair, and table are washed with soap and water. The mattress is aired for twenty-four hours unless in case of death or a cross infection, when it is taken to the sterilizer. Soap and water, air and sunlight are the important germicidal agents in carrying out this theory. All rubber goods, by sterilization in an autoclave, are simply washed off toys, combs, shoes, slippers, etc., which would be destroyed with soap and water and aired for twenty-four hours. The patient's clothes worn on admission are sent to the laundry—that is, anything that is washable. Suits, furs, hats, and gloves are aired for forty-eight hours in the sunlight.

When ready to care for her patient, the nurse puts on her gown, which hangs in the room, and proceeds to bathe the patient, make the bed, and take the temperature. When through with this she washes her hands and unties the strings on the neck of her gown, then those at the belt, bringing them forward and tying them so they will not drag on the floor. Then she removes the gown and folding the inside in hangs it on the hook. Her hands having thus been contaminated again, she gives them a thorough scrubbing. The scrubbing bowls are kept uninfected and are operated by the arm-lever or by the foot-pedals. The hands are held under running water and then soaped with a liquid from a container attached above the bowl, when they are scrubbed with a nailbrush. The palms are scrubbed, while the back of the hands and the arms are simply well washed, as the skin is too sensitive for the constant application of a brush. Individual towels about 15 inches square are used. In choosing the material for the towels it has been found that linen or huck which has been well laundered has been the least irritating to the skin and most satisfactory in regard to the wear of the laundry.

If the ward contains five or six patients of the same unit, i. e., all scarlet fever or diphtheria, it is not necessary to scrub between patients. Each room contains a small shelf large enough to hold a jar with 65 percent alcohol for the thermometer and individual jars for cotton and ointment. In a ward with several units more shelves would be needed. Hooks for gowns are provided in the same manner. When planning the rooms it would be well to have the washbowl fixtures on the opposite side from the gown and shelf fixtures.

Soiled linen is thrown down a chute operated by a foot or arm control. This laundry is gathered up by a porter who wears a gown and washable gloves, which are thrown in the laundry when he has finished.

The porter wears a gown and gloves when entering an infected building. The doors are usually opened and left open until he has completed whatever work he is about. If only one hand is used in carrying a pail or basket, the glove on the noninfected hand could be slipped off and the door be opened with the clean hand. All door knobs on the ouside of the doors are washed daily with soap and water. Any repairs made by workmen are made without wearing gowns, as they never handle the patients and always wash their hands on leaving the ward. Maids for the wards always wear gowns, removing them before leaving the wards and scrubbing their hands.

The food served in these wards is sent to each floor from a food carrier in the basement, which has been wheeled from the main kitchen, and is placed on a dumbwaiter. It is then taffen off at each serving kitchen and served on the trays. When collecting these trays they are placed in a large steam dish sterilizer, one at a time. The dishes with the waste food are then taken out without touching the outside of the sterilizer and the food emptied into the waste can, which is next to the sterilizer. The dishes are then replaced in the sterilizer. The maid then turns on the water until all the dishes are completely covered. She then turns the steam on. The dishes are kept in until fifteen minutes after the boiling

*Courtesy of the United States Naval Medical Bulletin.

point has been reached, when they are taken out and given the ordinary dish washing.

Bedpans and urinals are emptied into a hopper and washed with running water, after which they are placed in a utensil sterilizer, and when a sufficient number have accumulated they are covered with water and boiled for the same length of time as the dishes. This same technic applies to other basins and other utensils used in an infected area.

Before sweeping floors they are sprinkled with oiled sawdust, and the brooms used are scalded between each room. After all the rooms are swept one attendant gathers up the sweepings with a pan and brush, which are afterwards scalded and aired.

In case of death the same technic is carried out, the bodies being considered infectious. The nurse wears her gown when bathing the body, and all orifices are packed with carbolized cotton. She then summons the porter, who takes the body to the morgue wrapped in a clean sheet.

All patients must stay in their own rooms unless they are allowed out of doors or have lavatory privileges. If children come out of their rooms or throw toys out of their own area they are kept in bed, or if necessary the door is closed. The toys given to very small children are usually tied in some manner to the bed.

Patients are permitted to write letters, and collections are made triweekly, when they are sent to the dry sterilizer. Legal documents may be signed without contamination if two clean towels are spread on the bedside table and the paper placed between them, leaving the space for signature uncovered. The nurse holds the towel and paper steady, and the patient, to whom an inked pen is given, affixes his signature.

Special points to be remembered in the carrying out of this technic are: never to touch the face while the hands are contaminated, not to lean against beds, chairs, or any furniture in the room unless a gown is worn. Remember to take into the room everything necessary to serve the patient before getting contaminated, to avoid either extra scrubbing of hands or the calling of a clean nurse away from her duties. Always scrub under running water.

This special technic would probably differ somewhat in different hospitals, but it should be remembered that the fundamental principle is the avoidance of contact, direct or indirect.

In summarizing these collected data it must be borne in mind that it is absolutely imperative to have the proper equipment at hand, i. e., plumbing, sterilizers, an abundance of linen, gowns and towels, particularly, before a practical demonstration can be carried out.

A Hospital Department for the Journal-Lancet

The *Journal-Lancet* announces that it hopes to begin in an early issue a hospital department with a specific purpose wholly different from that of the general hospital departments of most medical journals. Its purpose is to be the best solution of the problems connected with a community hospital whether of two, ten, or forty beds. The occasion is the rapid increase in the number of hospitals in the Northwest. The new department is to be conducted by a man of large practical experience and of recognized ability whose name is not mentioned.

The way to Heaven always lies by your neighbor's door.

Present-Day Conditions Applying to the Purchase of Hospital Supplies

BY GEORGE W. WALLERICH, Chicago, Associate Editor of the Technical Department of THE MODERN HOSPITAL.

A review of present-day prices applying to some of the hospital staples, such as dressings, instruments, gauze, cotton, catgut, electrical apparatus, etc., brings strongly to mind the fact that in comparison with prices covering other commodities, the raise in prices has not been exorbitant. True, there are a few instances in which price advances have seemed unwarranted, but when such cases are inquired into, it will be found that as a rule the advance is fully justified.

I have recently asked for an expression of opinion from a number of manufacturers concerning the prospects of possible price advances, prompt deliveries, etc. The replies have naturally varied considerably, but as a whole, may be considered very favorable.

The cotton and gauze situation is, of course, a serious one, but not to such an extent that there will be such shortage as to greatly handicap civilian hospitals. No other commodity has been in comparative greater demand by the army and navy, all of which have had to be supplied in the least possible time. When one considers that this demand is one which formerly did not exist and that within a few months American manufacturers have been able to meet it, it is to be wondered that there is sufficient cotton and gauze left to take care of the civilian hospitals.

This is only one of the many thousands of cases in which the American manufacturer has been able through his resourcefulness to meet the increased demand, which war conditions have brought about. Several concerns have been established for the manufacture of a wood fibre cotton substitute. This material has many good qualities and gives promise of replacing cotton for use in certain cases. It has high absorption capacity, and, while naturally not of such fine texture as the better grades of cotton, can be used with equally good results where indicated.

We have not yet to any great extent made a practice of reclaiming soiled dressing material in this country. This is done to a great extent in European countries and was common practice even prior to the war. With our modern laundering machinery, sterilizers, etc., it would seem that this subject is worthy of consideration.

Catgut occupies an important place among that material which must be supplied in unusual quantities at this time. America has always been a large producer of surgical catgut of the best grade, and several very excellent makes have only recently been placed upon the market. Evidently there will be no shortage of catgut.

Surgical needles are the one item which have given hospital people no little concern. England has always been a large producer of surgical needles, in fact, needles of all types, and until some months ago a great many needles were exported to America, but, with the ever-increasing demand from the armies of the allies, this source of supply has practically been stopped. Under supervision of the British War Trade Department, all manufacturers of English-made needles have been consolidated, and the distribution of their product regulated by the British director of army contracts. This has resulted for the time in the cutting off of export shipments of surgical needles, unless for use in the allied armies. The variety of patterns has also been reduced to a considerable extent, and it is absolutely necessary that surgeons in this country should adapt themselves for the time being to the use of substitutes that surgical supply houses may be able to furnish them, instead of continuing to insist on

getting their favorite shape or size af needles, which they have been accustomed to use.

American manufacturers have again come to the fore, and one house in particular has prepared for the manufacture of surgical needles on a large scale. This concern is already making delivery of some needles, though they will require time in order to be able to produce on a very large scale for use of civilian hospitals, since this firm was recently commissioned to make upward of 50,000 gross of surgeons' needles for the U. S. Army.

The paper bandage has recently made its appearance and as a secondary dressing is proving very satisfactory. This is a form of crepe paped and, therefore, has considerable elasticity, adapting itself to contoured surfaces quite as well as gauze bandages. This dressing can be used by placing it over a layer of gauze at a considerable saving in the cost of all gauze dressings.

Hospital furniture at the present time is being sold at prices somewhat in advance of those in force a year ago. This must be expected, as every single item entering into the manufacture of hospital furniture has been affected. Steel, brass, porcelain, plate glass, enamel, and labor have advanced. Prices affecting pressure sterilizers in particular, have had to be advanced by manufacturers. Government requirements have been large, as the cantonments in this country as well as a great number of base hospitals abroad have had to be equipped. Most of this hospital furniture, however, is being made in the Eastern factories, with the exception of one or two cases, probably owing to the saving of time in making freight deliveries to the Eastern ports.

Improvements in electrical equipment for hospital use have been numerous, a great many new devices having been designed in response to army and navy demands. Some of these will be described in early issues of THE MODERN HOSPITAL.

There is hardly a firm manufacturing x-ray equipment at this time which is not working on army contracts, but practically all have been able to manage their production so as to take care of the demand for equipment, aside from that going to the government.

The manufacturers of surgical rubber goods apparently are all about in the same position, the substance of this being well stated by one of the larger manufacturers, who writes:

"In view of the conditions existing, due to the country being in a state of war, the action of the fuel conservator and the very large requirements of the government and Red Cross, it is altogether desirable that users of rubber goods of all kinds should anticipate their requirements well in advance of their actual needs.

"While this factory is in a position to fill the average order within ten days from date of receipt at the present time, yet the indications are that wthin a short time it will take at least thirty days to take care of domestic requirements.

"No correct estimate can be made at the present time as to future prices. The scarcity of ocean tonnage carrying crude materials, disturbed conditions in the labor market and other factors, as such that prices are liable to change at any time. It will be the endeavor of rubber manufacturers to hold their prices as stable as possible, but no guarantees can or will be given. The situation is one of uncertainty, and hospitals will protect their own interests by placing their orders now."

Surgical instruments are now far more plentiful, as regards the quantity and variety of pattern, than they were a year ago. There is, however, a very great difference in the quality of many of the instruments being offered, and great care should be exercised in their selection.

But comparatively few steel surgical instruments were manufactured in the United States before the war, owing chiefly to the fact that this line of industry is one of the established trades in Europe, generations of mechanics having made their life work nothing but the making of surgical instruments. Naturally such workmen could make them correctly and in less time than where they had to be made by mechanics just taking up this particular class of work. The European scale of wages being much lower and with a low import duty in this country, the industry is one which formerly could not develop here.

When the war came, we were indeed in a difficult position and the greatest credit is due to those American firms which had the courage to invest their capital in equipping factories for making surgical instruments in the United States. By the use of modern machinery and much patience in teaching workmen a new art, the manufacture of instruments has progressed, until today a good representative line of instruments of American make can be had. Prices are naturally somewhat higher than formerly, and for a time many of the instruments were far from correct in pattern, finish, temper, etc., but these imperfections are being rapidly rectified.

The Japanese were quick to grasp the opportunity offered when European makers of instruments were out of the American market. Every buyer of steel instruments has had some experience with the Japanese product. Some of these are of good quality, though seldom well made, and but rarely of correct pattern. It is not our purpose to condemn the Japanese goods, but one should depend upon responsible dealers, who through experience are able to judge well an instrument from a mechanical point of view.

The demands for instruments from the army have been heavy, and will continue during the period of the war. Such instruments as are needed are being supplied by American manufacturers, in addition to those which are required for home use, and while for a time this has handicapped the dealers, this condition has improved considerably, so that since the army requirements are of comparatively few patterns and are now being manufactured on a quantity basis, most of the surgical dealers can now make deliveries upon receipt of orders, or at least within a reasonably short time.

On the whole, the shipments of such material as is needed for hospital maintenance is available as promptly as may be expected under present conditions, and while prices have advanced, they are no greater, relatively, than prices of other commodities. Much of this extra expense can be offset by watching the waste and my using a less expensive substitute where possible.

Reorganization of the Committee on Hospitals

The committee on hospitals of the General Medical Board of the Council of National Defense has been reorganized with the following membership:

Dr. S. S. Goldwater, New York, Chairman; Dr. Winford Smith, Baltimore; Dr. Joseph Marshall Flint, New Haven, Conn.; Dr. Shepherd I. Franz, Washington, D. C.; Dr. Edward Martin, Philadelphia, Pa.; Dr. F. F. Simpson, Washington, D. C.; Col. Robert E. Noble, Washington, D. C.; Dr. Frederick A. Washburn, Boston.

Our grand business in life is not to see what lies dimly at a distance, but to do what lies clearly at hand.—Carlyle.

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH,
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

A Course in Medical Diseases

BY ETHEL P. CLARKE, Director of School of Nursing, Indiana University.

This is the day of surgery; its strides have been so spectacular, its achievements so marvelous, its demands so imperative, that it is little wonder that it has absorbed much attention in our hospitals from the administrator, from the nurses, as well as from the medical staff. In nearly all general hospitals a much larger proportion of beds are set aside for the use of surgical patients than for any other class of cases, with the beds always occupied and the admitting officer clamoring for more. Nevertheless, medicine has also made its great advances, and from the nursing viewpoint there is little doubt that the medical service offers a more critical group of cases, and one demanding a higher degree of nursing ability; moreover, there will be a greater variety and number of nursing procedures used, making it a very valuable teaching field.

The patients are all sick, and the nurses' resources will often be taxed to the utmost in order to make them comfortable and happy, the wards in this respect differing from the surgical wards, where a large number of the patients are only incapacitated and feel perfectly well. Many are there because of accident or injury, perhaps with fractured limbs or an amputation, and after the first few days they can be cheerful and interested in their surroundings and each other.

For the young student nurse, anything pertaining to surgery seems to have a potent charm, which makes it all the more necessary to present the teaching of medical diseases in a thorough and convincing manner in order to arouse a real and lasting interest.

More and more the training schools are impressing upon the students the fact that they have a very definite place in the campaign for the prevention of disease and the education of the community in the laws of health. The public-health field is attracting a large number of the young graduates, and, if we pause to consider a moment, we realize that a large proportion of this work is medical, dealing, as it does, with general sickness in the homes, with the children in the schools, with infant welfare and tuberculosis; therefore it is indeed important that due weight be given to this course in the curriculum, and that the students be imbued with a lively zeal and an appreciation of the place it will probably take in their future career.

With these points in mind we have tried to outline a course in medical diseases as part of the three years' training, and one which might be carried out in any large general hospital. Experience in the care of contagious diseases and tuberculosis is provided for, assuming that wards for these cases are a part of the hospital plant. If such wards are not available it is usually possible to arrange affiliations with other institutions, and some provision for this very valuable training should certainly be made.

The course as outlined gives this experience in the first and third years.

First year:

1. 8 weeks general medical wards, male and female.
2. 4 weeks tuberculosis wards.
3. 8 weeks contagious wards.
4. 4 weeks dispensary.

Total, 24 weeks.

Third year:

1. 4 weeks general medical wards.
2. 4 weeks tuberculosis wards.
3. 8 weeks contagious wards.
4. 4 weeks social service department.

Total, 20 weeks.

In a hospital of 300 beds each class will number about 48 or 50 students, and these are divided into two sections of 24 or 25 students each.

In the first year the section of 24 is divided into six groups of 4 students, which are rotated through the medical department in four-week periods. As the contagious department is large, two groups can easily be handled at one time, so that each group will spend a double period of eight weeks there. Since it is better to allow the students to have some ward experience before going to the dispensary, one group will begin the practical work four weeks later than the others, and therefore finish later, as shown in Table 1.

TABLE 1. WORK OF GROUPS A, B, C, D, E, F—4 STUDENTS EACH.[1]

	Medical, male	Medical, female	Tuberculosis	Contagious	Dispensary
1st 4 weeks	A	B	C	D, E	...
2nd 4 weeks	C	A	F	D, E	B
3rd 4 weeks	D	C	B	A, F	E
4th 4 weeks	B	D	E	A, F	C
5th 4 weeks	E	F	D	B, C	A
6th 4 weeks	F	E	A	B, C	D
7th 4 weeks					F

[1]E's schedule for the twenty-four weeks is traced by arrowed lines. The other groups can be followed similarly.

In the third year the section of 25 is divided into five groups of 5 students each, which are rotated through the medical department in four-week periods, again handling two groups for a double period in the contagious department.

TABLE 2. GROUPS A, B, C, D, E—5 STUDENTS EACH.[2]

	Medical, male or female	Tuberculosis	Contagious	Social Service
1st 4 weeks	A	B	C, D	E
2nd 4 weeks	E	A	C, D	B
3rd 4 weeks	C	E	A, B	D
4th 4 weeks	D	C	B, E	A
5th 4 weeks	B	D	A, E	C

[2]E's schedule for the twenty weeks is traced by arrowed lines. The other groups can be followed similarly.

By this arrangement there will be some members of both preparatory and senior classes on the wards; this should

be beneficial to the students, and serve as a stimulus to produce work of a high grade.

Some of this ward experience may be given on night duty, particularly in the senior year. Therefore, it will be necessary to have one of the assistants to the general night supervisor in charge of all medical wards with the exception of the contagious department, which has its own night staff, responsible to the general night supervisor.

GENERAL MEDICAL SERVICE

It may seem that twelve weeks in the general medical wards is a very brief period, but the training is intensive, and it should be borne in mind that in the contagious department many general conditions will be met with, such as heart, kidney, and lung complications, which will supplement this experience; and again later, when the student receives her training in the nursing of children, she will spend a period in the medical ward in that department, for which the work in the first year will lay the foundation. It has not been included in this outline for the reason that it seems better for the course in pediatrics to cover all branches of that service.

The medical wards are two in number, male and female, with eighteen beds in each. With an active service these provide good experience, and having a dispensary to draw from, the teaching aspect of the cases is likely to be taken under consideration when admitting them. Cases of skin disease, and eye, ear, nose, and throat conditions needing medical treatment in the hospital will probably be admitted to the same wards.

Necessarily different seasons of the year will find different kinds of diseases among the patients, pulmonary, bronchial, and rheumatoid conditions being more prevalent in the winter and early spring months, and typhoid, malaria, etc., during the summer and fall. With the training arranged to cover two distinct periods, in the preparatory and the senior years, it is an easy matter for each section to have experience in both seasons.

The two medical wards should be in charge of a graduate supervisor, with a graduate assistant as head nurse in each ward. These nurses should be considered teachers as well as executives, as indeed should all the graduate nurses in the hospital holding similar positions.

TUBERCULOSIS SERVICE

It is undoubtedly true that the majority of nurses graduate with a deplorable lack of knowledge of tuberculosis, and many with a certain fear of it, as witnessed by the difficulty often encountered in the effort to secure a nurse to care for such cases in the home, where the environment is excellent.

That the disease is very prevalent is common knowledge, and investigation shows that it is found in all classes of society, irrespective to a certain degree of economic conditions, and in the rural districts as well as in the congested cities. Experience has proved to us that the cases that are discovered early and given proper education and treatment, have a large chance of becoming arrested, thus enabling the patients to be happy, useful, and self-supporting, instead of a burden to themselves and to society. If the campaign against this disease could be sufficiently active and thorough, it is probably true that a very few generations would see it stamped out.

In any program of prevention laid down by physicians and sanitarians, nurses are an essential factor. Therefore, it seems imperative that our nurses have a sound knowledge of tuberculosis. They go into the homes of the poor and the wealthy alike, and with proper training should be ever on the alert to discover suspicious cases and urge them to seek the advice of a good physician at once, but they cannot discover if they don't know what to look for, and the only way they can learn is by actual experience in dealing with such cases.

The tuberculosis wards have twenty-four beds, twelve male and twelve female. It would be most desirable to have four beds in each division set aside for incipient cases, for patients that come to the hospital for a diagnosis, as it is in dealing with this class of cases that a nurse can be most helpful in overcoming the disease.

This department will have a graduate supervisor, and one graduate assistant as head nurse of the male and female divisions. It is well to have the very early cases separated from those that are more advanced, for their regime will be very different; also the discouragement caused by the more advanced cases will be avoided.

The instructor in occupational therapy will find here much opportunity for valuable work, and the students will get an insight into the important therapeutic value of pleasant useful occupation in any disease where the period of inactivity is necessarily long.

CONTAGIOUS SERVICE

The contagious wards will certainly number many children among the patients, but adults will also be found there. Thirty-six beds will give excellent experience in the various diseases.

The administration of the department will demand a graduate supervisor with two graduate assistants, and a graduate head nurse and an assistant at night. This may seem a large staff, but it is necessary in order to give the students the rigorous drill that is imperative with the most modern methods of handling cases of this character. It is desirable that experience in all the diseases be given to each student, which may be arranged by interchanging them among the various units at regular intervals. Any complicating surgical conditions that may arise necessitating intubation or tracheotomy, etc., would be taken care of in the department, so adequate provision would be made for dealing with them, and the students should have the benefit of this side of the work.

As before stated, many hospitals have not the contagious wards; under such conditions arrangements should be made for affiliation with a special hospital, in the same city if possible. Assurance that the students will have the proper supervision is very necessary, and it is well for some method to be worked out whereby they may return to their own school for class and lecture work.

DISPENSARY

It is supposed that the hospital has a large and active out-patient department, with daily clinics. This allows the student to come in contact with patients under more natural conditions. Heretofore she has usually seen them after they have passed through the admitting department, when they come to the wards ready for bed and clad in hospital clothing. She will receive many new impressions, and the patient will assume an individuality that he has not before possessed; also these ambulatory patients will often present an entirely different clinical field from those she has seen in the wards and thereby prove of great teaching value.

If the clinics are held in the morning, two or three hours in the afternoon may be given to visiting the patients in their homes, studying the living conditions, and helping the patients to carry out the doctor's instructions; perhaps teaching some member of the family simple routine

care or matter of diet. It may be in the course of her visit she will see others of the household needing medical attention, and she will have the opportunity to urge them to come to the dispensary also.

This will much increase the student's interest in the patients, stimulate her powers of observation, and enlarge her horizon, really helping to give her a social viewpoint, though while she is receiving her dispensary training the home visiting is done by her very distinctly in the capacity of nurse, rather than that of social worker.

The student will have other dispensary training so that at this time her attention is given to the four clinics for general medical diseases, skin diseases, tuberlucosis, and special diseases (eye, ear, nose, and throat). A week should be spent in each clinic, making the work just as intensive as possible.

This medical division of the dispensary will be in charge of a graduate supervisor, with a graduate assistant. By this means the students may be followed very closely, allowing them all to see cases of special interest in any one of the clinics. The supervisor will arrange for all "follow-up work" in the homes, and her assistant will be responsible for it, going with certain students each day and directing their efforts. In this way they will be left to themselves part of the time, giving them opportunity to develop self-reliance and initiative, yet not without careful guidance.

SOCIAL SERVICE

This department offers a most interesting and valuable field of study, and one that is usually much enjoyed by the student. It is not used as training to fit her for the special field of social work; the few weeks spent there would be utterly inadequate for that purpose, but it should aid greatly in giving her a social sense, and lead her to look beyond the patient in the bed and seek for the causes that have brought him there and the way they may best be remedied. She will learn that the hospital has not completed its work when the patient is discharged, in as good condition as may be; that it is its duty to follow that patient into the home and help him to complete the cure by whatever steps may be necessary, whether it is sympathy and encouragement, a new job, different environment, or what not.

During the time spent in this department it is better for the student not to wear her nurse's uniform; at the moment she is not a nurse, but a worker striving to make a social diagnosis, which is often as important as a physical one, as far as the patient's ultimate welfare is concerned. She should wear a neat and befitting street dress; this in itself is educative, for many nurses depend so entirely on the neatness and exactness of the uniform that they are careless and somewhat lacking in discrimination when it comes to wearing other clothes.

It is important that the director of this department, who will be responsible for the students while there, shall have a sympathetic understanding of their needs, and that such cases shall be selected for their study as will prove of greatest value. After the first week the students may be given certain cases as problems to solve for themselves, the director or one of her assistants keeping in touch with the progress made from day to day, and putting forth a guiding hand when necessary. The experience the hospital has already afforded with its charts will be of value in enabling the student to grasp the importance of the social records, and she should be able to keep them accurately with very little difficulty.

It may be that some students are particularly interested in children, surgery, or mental diseases; it is well to allow such to have their social service experience in those departments, a matter which can be easily arranged. It is probable that more enthusiastic work will be given if they feel that they have a certain freedom of choice; moreover, it impresses upon them the importance of considering what their future work is to be.

OCCUPATION THERAPY

This work is new for general hospitals, though a few have established it and give very encouraging reports of its value. Undoubtedly it is here to stay, and the next few years will probably see great developments along many lines. The course as planned will not fit a nurse to work as an instructor in occupation, but she may learn to do one or two things quite fairly well. She will be able to deal better with many of her patients if she can arouse their interest in doing something useful and attractive, and perhaps be the means of starting some on the road to making a modest livelihood. Should she decide to make it her future work her professional training will be of immense value to her, making possible close and intelligent cooperation with the physicians.

The tuberculosis and psychopathic wards will probably offer more patients needing this work, but surely there will be others in both medical and surgical wards, who could go to a shop for a few hours a day; and some bed patients will be better and happier for useful and attractive occupation.

The crafts selected in this outline can be taught in any demonstration room, and would demand very little outlay in the way of tools and equipment. Much of this work can be done in a wheel-chair, or even in a bed if the patient is unable to be up. The pottery work is extremely inexpensive, fifteen to twenty cents furnishing clay enough to make a good-sized bowl or vase, and almost every large city will possess means for firing any articles made, so it is not essential to install a kiln. The basketry is attractive, and in the reed work the patients can quickly see the results of their efforts, and are delighted with the useful articles they are able to make.

METHOD OF TEACHING

The nurse instructor who is responsible for the teaching of medical diseases should meet the supervisors of the departments in a group at regular intervals, and discuss the cases on the wards and in the out-patient departments from the teaching aspect, and for their mutual benefit. She will let them clearly understand her aims and methods in order to enlist their sympathy and cooperation. Good team-work is essential, and the more closely they work together the better will be the result. Each supervisor should have an outline, with dates, of all class and lecture work, so that they may know the ground that is being covered, and correlate their ward teaching with it as far as possible. The nurse instructor will discuss the material for department classes with each supervisor and render any assistance necessary.

Much of the practical instruction should be given at the bedside of the patient to small groups of students; such a method demands considerable time, but it well repays the effort made in better and more finished work. In addition a demonstration class room will be required. Since these students in their preliminary course as probationers have had thorough work in the principles of nursing, with demonstrations and practice, any demonstrations given with this course are largely a matter of review. They serve the purpose of associating the treatments with the various diseases, and should be performed by the students,

thereby increasing their skill and giving them valuable experience in working before spectators and explaining the steps of their procedure as they do so.

The theoretical work is given largely in lecture form, followed by recitation classes. Inasmuch as each ward has preparatory and senior students, which allows for alternation of hours off duty, there is every reason for all lectures and classes to be held during the day.

The first-year work is divided into five courses as follows:

COURSE I

Medical Diseases, Twenty weeks. Forty hours. Two lectures each week.

1. Review of heart structure and circulation. Endocarditis.
2. Pericarditis. Treatment of all damaged hearts.
3. Chronic failures of compensation. Valve injuries. Acute dilatation. Angina pectoris.
4. Arterial diseases. Arteriosclerosis, cause, symptoms, treatment.
5. Aneurisms. Forms, sites, symptoms, medical and surgical treatment. .
6. Anemias.
7. Leukemias. Hemophilia. Purpura.
8. Review of structure of lungs and air passages. Bronchitis. Acute coryza.
9. Acute lobar pneumonia, etiology, pathology, symptoms, course, treatment, sequelae.
10. Lobular pneumonia. Bronchiectasis. Congestion. Hemorrhages.
11. Emphysema. Lung abscess, Lung gangrene. Pleurisy. Empyema.
12. Toxic conditions. Poisoning from meat, milk, grains. Pellagra. Beriberi.
13. Gastro-intestinal tract. Stomatitis. Esophageal strictures. Esophagismus. Postdiphtheritic paralysis.
14. Acute and chronic gastritis. Gastric ulcer, pathology symptoms, treatment.
15. Gastric carcinoma. Gastric hemorrhages. Gastric neuroses.
16. Intestinal obstruction. Constipation, causes, symptons, treatment.
17. Colitis, causes, treatment. Appendicitis, forms, symptoms, causes, treatment.
18. Jaundice, types, causes. Acute atrophy of the liver.
19. Gall-stones, causes, symptoms. Symptoms as changed by position of stone. Complete obstruction of cystic duct, common duct, ampulla.
20. Cirrhosis of the liver, causes, symptoms, diagnosis.
21. Liver abscess. Liver tumor. Ascites. Pancreatitis.
22. Diseases of the kidney. Movable kidney. Nephritis, causes, symptoms.
23. Nephritis, parenchymatous and interstitial. Treatment of nephritis.
24. Ductless glands, functions. Diseases of thymus, adrenal, parathyroid, and pituitary.
25. Thyroid, simple enlargement of. Dysfunctioning. Hypothyroidism and hyperthyroidism.
26. Constitutional diseases. Gout. Diabetes. Scurvy.
27. Venereal diseases. Syphilis, cause, stages, course.
28. Congenital syphilis. Diagnosis and treatment of syphilis. Gonorrhea.
29. Gonorrhea continued, causes, treatment. Focal Infections. Tonsils, teeth, etc.
30. Typhoid fever, etiology, pathology, symptoms, course.
31. Typhoid fever continued; complications, treatment, sequelae.
32. Malaria, cause, life cycle of parasite, symptoms, treatment.
33. Diphtheria, cause, symptoms, complications, treatment.
34. Smallpox, vaccination. Chickenpox.
35. Scarlet fever. Measles.
36. Acute rheumatic fever. Meningitis.
37. Tuberculosis, cause, pathology, early symptoms.
38. Tuberculosis. Forms, acute miliary, chronic, acute pneumonic.
39. Tuberculosis. Treatment of pulmonary.
40. Tuberculosis, of lymph glands, serous sacs, meninges, kidney. Pathology, diagnosis, treatment.

COURSE II

Medical Nursing. Twenty weeks. Twenty hours. One class each week.

1. Nursing care in endocarditis, pericarditis, acute dilatation.
2. Angina pectoris. General care of cardiac cases. Diet.
3. Measures for relief and comfort of patients. Quiz on cardiac conditions.
4. Inhalations, bronchial kettle (use and preparation). Review on sputum. Collection and care of same.
5. Care of patient in fresh-air treatment, bed clothing, etc. Protection of nurse from cold. Preparation for aspiration.
6. Quiz on lung conditions.
7. Lavage, gavage, rectal irrigation and alimentation.
8. Review on vomitus. Gastric and intestinal hemorrhage. Application of heat and cold to the abdomen. Test meals.
9. Constipation. Discussion of its prevalence and importance. Diet.
10. Quiz on gastric and intestinal conditions.
11. Preparation for abdominal paracentesis. Abdominal pads and bandage for movable kidneys; methods of adjusting same. General care.
12. General care of nephritic cases. Collection and care of urine.
13. Quiz on liver, kidney and ductless gland conditions.
14. Care of diabetic cases. Diets.
15. Precautions for infectious venereal conditions. Mercurial inunctions. Preparations for salvarsan.
16. Quiz on constitutional and venereal diseases.
17. Nursing care of typhoid, diet, hydrotherapy, etc.
18. Malaria. Hypodermic use of quinine. Diphtheria, general nursing care. Recognition of danger signals, preparation for emergencies.
19. Prophylactic care in communicable diseases.
20. Quiz on communicable diseases.

COURSE III

Special Diseases. Twenty-four weeks. Twenty-four hours. One lecture each week.

A. Skin Diseases:

1. Review of anatomy and physiology of skin and glands. Terms used in describing skin diseases. Classification.
2. Hyperemias and inflammations. Erythema of scarlet fever, Intertrigo, Dermatitis exfoliativa, Urticaria, Pellagra, Psoriasis, Eczemas, types papular, vesicular, infantile.
3. Inflammations continued. Herpes, simplex and zoster. Impetigo. Furunculosis. Carbunculus. Erysipelas. The exanthematal eruptions.
4. Hemorrhagic conditions of the skin. Purpura, Nervous, etc.
5. Hypertrophies. Keratosis, Ichthyosis, Callosities, Elephantiasis.
6. Pigmentation disturbances and neuroses. Leukoderma, Hyperesthesia, etc. New growths: Cicatrix, Keloid, Fibroma, Lipoma, Myoma, Tuberculoses of skin. Manifestations of acquired and hereditary syphilis. Carcinomas. Sarcomas. Leprosy.
7. Diseases of appendages. Hair and hair-follicles. Alopecia. Seborrhea. Sycosis. Nails. Malformations. paronychia, etc. Glands: Seborrhea, Steatoma, Acne, rosacea and vulgaris, etc.
8. Parasitic affections, Animal: Pediculosis, Scabies, Echinococcus, etc. Fungus: Tinea, Thrush, Favus, Blastomycosis, Actinomycosis.

B. Eye Disease:

1. Review of anatomy and physiology of eye.
2. Care of normal eye. Eye-strain, effects, prevention. Defects, Myopia, Hypermetropia, Presbyopia.
3. Examination of eye, instruments used. Methods of treatment. Solutions used, preparation, care of.
4. Injuries to eye. Ruptured cornea, etc., treatment. Foreign bodies, etc., treatment.
5. Diseases of eyelids. Blepharitis, Hordeolum, Chalazion. Diseases of lachrymal apparatus and conjunctivae.

6. Diseases of cornea, choroid, and lens. Corneal ulcer, Keratitis Iritis, Glaucoma, Cataract.
7. Communicable eye diseases. Gonorrheal conjunctivitis. Ophthalmia neonatorum. Trachoma, causes, symptoms, treatment. Social view of same.
8. The poisons. Wood alcohol. Preventable blindness. Legislation concerning communicable eye diseases and wood alcohol. Educational function of the nurse.

C. Nose and Throat Disease:

1. Anatomy and physiology of pharynx, larynx, mouth. Examination of throat and mouth. Treatments.
2. Pyorrhea. Abscessed teeth. Dental hygiene. Tonsils and adenoids. Diseases, indications for removal. Treatment of tonsilitis, quinsy. Diseases of larynx, growths, edema, laryngitis, diphtheria, treatment.
3. Anatomy and physiology of nose and accessory sinuses. Defects. Deviated septums, etc. Nasal treatments.
4. Diseases. Acute and chronic rhinitis. Coryza. Infection of sinuses, causes, symptoms, effects on general health. Complications. Brain abscess, meningitis.

D. Ear Diseases:

1. Anatomy and physiology of ear. Deafness, causes, prevention, treatment. Tests of hearing. Tests of labyrinthine apparatus.
2. Diseases of external ear and auricle. Foreign bodies. Impacted cerumen. Eczema. Furunculosis.
3. Diseases of middle-ear. Chronic and acute otitis media. Mastoiditis.
4. Diseases of labyrinth, and complications of middle-ear disease. Labyrinthitis, Cerebral abscess. Meningitis. Sinus thrombosis. Symptoms of these complications, treatment.

COURSE IV

Nursing in special diseases. Sixteen hours. Following lectures in Course III.

A. Skin Diseases:

1. Application of washes, ointments, powders, etc., baths, packs. Protection of clothing and bedding.
2. Care of communicable skin diseases.
3. Quiz on hyperemias and inflammations.
4. Diet in skin diseases.
5. Restraint in itching conditions for adults and children.
6. Quiz on skin diseases.

B. Eye Diseases:

1. Application of remedies, irrigation, drops, ointment, heat, cold. Dressings, bandages, shades.
2. Care of communicable eye diseases.
3. Quiz on non-communicable eye diseases.
4. Quiz on communicable eye diseases.

C. Nose and Throat Diseases:

1. Treatments for nose, nasal douche, nasal spray, preparations for packing, etc. Treatments for throat, sprays, gargle, external applications.
2. Dental hygiene and dental clinics.
3. Preparations for examining eye, ear, nose, throat, assisting with same.
4. Quiz on nose and throat diseases.

D. Ear Diseases:

1. Treatments for ear, douche, drops, external application of heat, cold, etc.
2. Quiz on ear diseases and complications.
3. The school nurse and routine examinations of the children. Scalp, ears, mouth, etc.

COURSE V

Department classes. Twenty-four weeks. One class in all divisions each week.

A. General Medical Service:

1. General outline of work in medical wards.
2. A nurse's duty in examination of chest, abdomen, extremities. Medical rounds. Routine and preparation for.
3. Discussion of cases of special interest.
4. Reports by students on assigned cases.
5. Care of helpless patients. Feeding, lifting, care of back, etc.
6. Care of special precaution and isolated cases.
7. Collection and care of laboratory specimens.
8. Reports by students on assigned cases.

B. Tuberculosis Service:

1. Pulmonary tuberculosis. Cause, symptoms, precautions, distribution, etc.
2. Rest, food, air.
3. Special bed-making and clothing for patients. Protection of nurse in open-air treatment.
4. The tuberculosis campaign. Organization, statistics.

C. Contagious Service:

1. General prophylactic precautions for patient, physician, nurse and ward attendants. Special care of wards, heat, light, ventilation, noise, etc.
2. Special precautions in the various diseases. Isolation, disinfection, etc.
3. Vaccines, antitoxins, source, uses, preparations. Care of same.
4. Eruptions, forms, appearance, duration, etc.
5. Restraining children in delirium, resistance to treatment, etc.
6. Regulation of diet.
7. Complications in the exanthemata. Effect of these diseases on a child's future.
8. Reports by students on assigned cases.

D. Out-Patient Department:

1. Aim and purpose of the dispensary. Its relation to other social agencies.
2. Visiting the patient in the home. Proper attitude and methods of the nurse.
3. Relation of nurse to patients, clerks, social workers, medical students and physicians in the dispensary.
4. Dispensary records. Methods of keeping same and importance thereof.

Courses I and III are best given by physicians, and Courses II and IV by the supervising instructor. Course V is a series of classes that should be given by the supervisors of the various departments, as each new group of students comes to them. Therefore, they will be repeated as often as necessary. This plan gives the students five classes a week for the first twenty weeks and only three classes for the last four weeks, when they will be completing Courses III, IV, and V; this will allow them time enough for the examinations.

The third-year work is divided into four courses as follows:

COURSE VI

Medical diseases. Eighteen weeks. Thirty-six hours. Two lectures each week.

A series of bedside clinics following the outline of Course I as far as the clinical material will permit.

COURSE VII

Medical nursing. Eighteen weeks. Eighteen hours. One class each week.

Case studies and reports by students on assigned cases and series of cases.

COURSE VIII

Department classes. Twenty weeks. One class in all divisions each week.

A. General Medical Service:

1. Purpose of medical experience in the senior year. Duties of senior students on medical wards.
2. Care of chronic cases in the home. Institutions available for such cases.
3. Simple devices for the use and comfort of the "shut-ins."
4. Discussion of cases of special interest.

B. Tuberculosis Service:

1. Tuberculosis in the homes of the poor and the middle class. Protection of the young child.
2. Industry and the tuberculous individual.
3. Tuberculosis campaign and its latest developments. Significance of the nurse in the programme.
4. Hospitals and tuberculosis. Boards of health and tuberculosis. Sanitarium care.

C. Contagious Service:

1. Eruptions. Periods of incubation. Quarantine of contagious diseases.
2. After-effects of these diseases on heart, lungs, kidneys, eyes, ears, etc.
3. Contagious diseases in the home. Methods of isola-

tion, disinfection, quarantine. As private nurse and as public health nurse.

4. Case reports by students.

5. Contagious diseases in the schools. Duties of the school nurse.

6. Discussion of cases of special interest.

7. Board of health and contagious diseases as affecting hospital, home, and school.

8. Case reports by students.

D. Social Service:

1. Aim and purpose of social service department, its relation to other departments of the hospital.

2. Social records, methods of keeping and filing.

3. Brief survey of local social agencies; their purpose and relation to this department.

4. The training necessary for a nurse to become equipped for social work. How and where to obtain it. Opportunities in the field.

COURSE IX

Occupation therapy. Twenty weeks. Forty hours. Two hours each week.

1. Sources and history of some of the crafts; basketry, pottery, bead work, etc.

2. History of occupation therapy. Social and economic significance.

3. Workshops in our general hospitals.

4. Workshops in state and county hospitals.

5. The mental attitude of the handicapped. Legislation concerning the handicapped in industry.

6. Teaching of the handicapped.

7. Recent developments in the work.

8. Work with the deformed and crippled.

9. Functional and organic nervous diseases.

10. Mental diseases.

11. Cardiac diseases and tuberculosis.

12. The nurse as an occupation instructor.

Shop work. Instruction in basketry (reed and raffia), knitting (by hand and machine). Crochet. Modeling and pottery. Pillow lace.

Course VI will be given by a physician, Course VII by the nurse instructor, and Course VIII by the department supervisors, in the same manner as Course V. An effort is made here to emphasize the social aspect of the work, and to give the student a broad view of it rather than a purely technical one. Course IX necessitates an instructor in occupation, possibly non-resident. It is arranged with twelve lectures, and the remainder of the two-hour periods is to be given to work in the shop; demonstration room will serve every purpose, if such shop is not available.

Throughout the entire course on medical diseases the students should have access to a good reference library. They should receive careful instruction in the correct and economical use of it, and then be required to put such instruction into practice.

SUMMARY—PRACTICAL EXPERIENCE

Department.	No. of beds.	No. of students Preparatory.	Senior.	Period of service weeks. Preparatory.	Senior.
General Medical....	36	8	5	8	4
Tuberculosis.....	24	4	5	4	4
Contagious.....	36	8	10	8	8
Dispensary.....	..	4	..	4	..
Social Service.....	..	..	5	..	4
Total.....	96	24	25	24	20

THEORETICAL WORK.

	Number of hours Preparatory.	Senior.
Medical Diseases	40	36
Medical Nursing	20	18
Special Diseases	24	..
Nursing in Special Diseases	16	..
Department Classes:		
General Medical	8	4
Tuberculosis	4	4
Contagious	8	8
Dispensary	4	..
Social Service	..	4
Occupation therapy (with laboratory)	..	40
Total	124	114

Short Courses in Nursing*

BY M. HELENA McMILLAN, Principal of the School for Nurses of the Presbyterian Hospital, Chicago.

The question of giving or not giving short courses in nursing by the hospitals of the country has to be viewed from many sides and involves considerable thought. It would seem that the hospitals should be ready to undertake this additional burden if the need of the country or of the individual institution for this kind of assistance be evident or urgent, or if by so doing it can truly aid any one group of individuals without rendering an injustice to the other interests of the institution.

So far, beyond the training of a limited number of aids for base hospital units, the government has not requested the hospitals to establish such courses. It has, however, appealed to the patriotism of the young women of the country, requesting them to enter the organized nurses' schools and to qualify themselves for graduate nurse service, with the result that all over the country the representative nurses' schools are filled as never before, while there are long lists of waiting candidates, assuring for these hospitals and for the government a more permanent and efficient service than short period students could possibly give. Would it not seem natural, if short courses be established, that, accepting the easier method, young women would forget the request of the government, and neglect the tried and established way, causing a really serious nursing situation which might take years of effort to readjust.

It is a question whether the short course as now planned is of real value to the groups desiring it. It is not sufficiently long to be anything but superficial in nature, and gives the graduate neither matured judgment, true discipline nor accurate knowledge, but merely a certain amount of manual dexterity, with, possibly, a mistaken idea as to the degree of her preparedness and an encouragement to assume responsibilities for which she is not ready—a possible danger for the individual and those upon whom she tries her new knowledge.

Universities and other educational institutions accept into their classes "special students," but it is not their custom to enroll them free of charge, nor do they select for the special student the cream of the training material with the best of the instructors, necessitating that the "regular student" take what is left. It is questionable whether well-organized laboratories would allow untrained workers at large among laboratory material. Should not the hospitals, which work with the human being, the most sensitive of all working material, be equally careful? We do not hear of business organizations taking in a group of people, spending much time upon them, and expecting little or nothing in return. Are hospitals, maintained by money of the charitable, justified in adopting unbusiness-like methods?

It is quite possible that hospitals in the future, as has occurred in the past, may be short of student nurses, and under proper conditions, could advantageously use volunteer workers.

To be of value to the hospital, the volunteer should be willing to undertake the "humble" nursing duties, not for one day but for many days, and until it is safe to trust her with greater responsibility: she should accept the long hours of duty, doing a full day's work, not merely two or three hours in the morning; she should be under the direct control of the nurses' school and in all matters of discipline should submit to the same conditions as that of the regular student nurse, who in many of the hospitals is also

*Excerpt from the January Bulletin of the Presbyterian Hospital.

a volunteer worker. Under those conditions women who wish to help hospitals might really do so.

The short course as suggested seems to be exclusively for the benefit, not of the hospital, but of the woman, and is really an additional burden to the hospital, handicapping it in its routine work and upsetting its organization.

Surely there may be worked out some plan by whch the short course student of nursing could receive the instruction she desires, pay for the cost of instructors, class room equipment, teaching material, and allow the already heavily burdened institutions for the care of the sick to carry on their work undisturbed.

The Nursing-Preparatory Course in Vassar College

BY ISABEL M. STEWART, A.M., R.N., Teachers College, Columbia University N. Y.

Nurses everywhere will be interested in the recent announcement of a three months' preparatory course in nursing which Vassar College is planning to open this summer to college graduates who wish to enter for the two-years-and-three months course of training in nursing.

This plan of reducing the regular three-year course for women with full college preparation has already been accepted as a war emergency measure by a number of leading hospital training schools in the country, the idea being that pupils with this sound educational preparation might be pushed forward more rapidly into positions of responsibility, and so help to take the places of head nurses, teachers, supervisers, and public health nurses, who have been drafted into the national service. These training schools are simply adopting the general policy of the army and the navy who are recruiting their officer material for the new national forces largely from the men's colleges. There is no doubt that, among the students and graduates of women's colleges, there is much excellent material for the many teaching, organizing, and administrative positions in nursing, and it has been quite evident that, especially since the war began, many of these women have become keenly interested in nursing and eager to serve in the nursing ranks. The length of the three-year course has formerly been the chief obstacle in keeping them out, and now that their college work is being credited for part of this period of preparation, very much larger numbers are entering our nursing schools.

The fact that Vassar College has chosen to make its main contribution to national preparedness in the form of a preliminary course leading to the regular professional training in nursing, rather than in the form of popular short-cut courses for amateurs, is significant and encouraging. It is clear evidence of the growing recognition of nursing as a field for highly trained workers. It shows that the country is realizing the vital part the nursing service has to play in the prosecution of the war, and it seems to show also that with all the various forms of national service competing for the enlistment of our ablest and most thoughtful women, the old call for personal service to the wounded and suffering and the new call for life-saving through prevention and conservation still makes a very strong appeal.

In choosing this plan of the preparatory course in nursing, Vassar has had two main purposes in mind. First was the urgent need to increase as rapidly as possible the number of nurses available for enrollment in the Red Cross. By drafting into this extra summer class a good large group of highly qualified student recruits and giving them a period of intensive preparatory training, it was felt that they could get more directly into active service in the wards of the hospital, and would be able a little earlier to take the places of the senior nurses who will be steadily graduating into the army and navy service. Since very few hospitals are able to take in summer classes, these students would have to wait till fall to begin their preparatory course. They will thus be at least three months ahead in their preparation, and the hospital will be able to put them immediately into regular ward work without having to give them the initial period of instruction and practice which is necessary for any safe and intelligent service to the sick.

The other very important consideration which Vassar had in view was the desire if possible to relieve hospitals from some of the heavy burden they are now carrying. With their seriously depleted nursing and medical staffs and their growing expenses of maintenance, hospitals are still making every effort to respond to the country's need by admitting more classes and training larger numbers of pupil nurses, often at considerable additional expense and trouble. It is evident, however, that if other educational institutions can take over any of the necessary teaching work, without loss to the students, it would be not only a privilege but a duty, especially in this time of crisis, for them to offer to relieve the hospital of some of this work.

This, of course, is not a new idea. There has been an increasing tendency in recent years, especially in nursing schools affiliated with universities, to transfer part at least of the preparatory work from the hospital to the class rooms and laboratories of the college or university. This relieves the hospital of the most expensive and difficult part of the theoretical teaching, and it gives the students the advantage of better instruction in the scientific subjects and better educational facilities generally. While it is probable that the student suffers some disadvantages from the loss of the early contact with patients which helps to bring a richer meaning and a more definite purpose into her theoretical work, this seems to be more than counterbalanced by the greater thoroughness and intensiveness of a preparatory course which is not broken into by the exacting practical demands of the busy hospital wards.

The Vassar summer course has been planned with the advice and cooperation of the committee on nursing of the General Medical Committee on National Defense and also with the assistance of a small working committee from the National League of Nursing education. The American Red Cross has advanced the funds necessary to secure the best facilities and the most competent staff of instructors who can be obtained in the country. This money is a special gift and has not been drawn from the regular funds of the Red Cross. Several men and women of national reputation have already promised to share in the teaching work, and it is believed that these stimulating associations, the comradship of an unusually earnest and intelligent body of women, and the beautiful surroundings of Vassar College, as well as the call of the work itself, will combine to attract a large number of student recruits.

The Vassar Alumnae have undertaken the work of recruiting for the course and have already mapped out a publicity campaign which will extend over the whole country and which, apart from the primary object of enlisting volunteers for the summer course, will undoubtedly help to spread interest in nursing. The committee which has this work in hand includes such well-known Vassar Alumnae as Mrs. Hadley, wife of President Hadley of Yale, Dr. Katharine Bement Davis, and Miss Thurston.

This is no arm-chair "get-nursing-quick" scheme for the woman who is afraid of work. It must be distinctly un-

derstood that there is to be lots of good hard serious work and no triflers are to be allowed. The three months' course will extend from the middle of June to the middle of September, and will be divided into two terms of six weeks each. The work will require from six to eight hours daily in class, laboratory demonstration rooms and library. The subjects of the required courses will be anatomy and physiology, chemistry, bacteriology, hygiene and sanitation, nutrition and cookery, elementary materia medica, elementary nursing and hospital economy, and the historical and social aspects of nursing. For those who may have covered some of these courses satisfactorily in their previous college work, elective courses in psychology, social economy, and possibly physiological chemistry will be offered. A number of special lectures on interesting phases of nursing and social work will also be given.

The college is making arrangements with a number of representative hospitals throughout the country to admit these students for an intensive two-year course of training which will include all the theoretical work usually given in a good nursing school, and a somewhat shorter period of training than is usually offered in each of the essential branches of nursing—medical, surgical, obstetrical and children's work. If at all possible, experience in contagious and mental and nervous nursing is also to be included, since many of these people will probably enter some form of public health work.

The list of hospitals agreeing to cooperate on these general terms will be included in the announcement, which will be distributed widely. Each candidate for the summer course will be directed to make application to any one of these hospitals (or if she prefers to an approved hospital of her own choice) and to present her letter of acceptance when she arrives. When the capacity of any training school is exhausted, she will apply to another and so on till she is placed. She will be pledged to go directly into the hospital on the completion of her summer course, and after a brief period of probation it is expected that she will proceed at once with the more advanced work, leading to the hospital diploma and the R. N. of the state.

In states where there is a three-year law requiring this full time to be spent within the walls of the hospital, it will not be possible to make the adjustments necessary for this group of students, but already a very encouraging response has been received from several prominent training schools in other states throughout the country offering to provide for groups of from fifteen to fifty each. It is hoped that there will not be any special reduction in the numbers of pupil nurses entering in the regular way, but that these extra pupils can be used as an auxiliary force to relieve the pressure on the existing staff and if possible shorten the hours of duty, to provide against the possible drafting of senior nurses for war service and also to insure a greater increase in the total output of trained workers.

The experiment will be closely watched by a large number of college officers, students, and alumnae whose interest in nursing has already been greatly stimulated by the proposed plan. It will also be followed with much interest by everyone who is concerned with the advance of nursing education.

Dr. McCracken, president of Vassar College, and Mrs. Blodgett, one of the Vassar trustees who has been most influential in pushing the plan through, both feel that the success of the summer course depends largely on the cooperation and support of the hospitals and of the nursing profession. They are anxious that the standards of nursing training should in no sense be weakened but rather strengthened by this plan, and they are hopeful that it may lead to a much wider participation by college women generally in hospital and public health work. Miss Julia Lathrop, head of the national Children's Bureau, has been one of the most enthusiastic supporters of the proposed course and is eager to get the services of numbers of such well-trained women for the infant welfare campaign which leans so heavily on nurses.

Nurses will be interested in knowing that the dean of the summer school will be Professor Mills, a member of the Vassar College faculty who some years ago earned the appreciation and thanks of every member of the nursing profession by resigning from the school board of Poughkeepsie as a protest against the appointment of an untrained woman in the position of school nurse. Professor Mills will be supported by a member of the nursing profession who will have direct supervision over the actual work and life of the students.

Further details about the course may be obtained by applying to Vassar College, Poughkeepsie, N. Y. Nurses and nursing organizations throughout the country are asked to cooperate with the publicity committee of the Vassar Alumnae by spreading information about the course and by interesting possible applicants in it.

THE PROPER WAY TO MAKE A BED

Conservation of Energy Effected and Neat Appearance of Room Preserved by Proper Methods

BY H. M. SCHELLER, Superintendent Sunny View Sanatorium, Winnebago, Wis.

Each sanatorium, large or small, has its own problems in saving steps and conserving the energy of its nurses. Every nurse off duty for illness is a loss to the institution; every nurse with broken arches, strained back, or varicose veins is a loss. Each institution has its own difficult problems and each must seek its own remedy.

One task known to us all is the tiresome task of making beds. The saving of many steps and the conservation of much energy may be accomplished by employing a proper method of bed-making.

Before entering upon the task of bed-making, have everything in readiness, such as clean linens, blankets, etc. In other words, let us train our heads to save our heels. The next step is to straighten the bed covers on the bed to be made, loosening them from foot and sides, using every precaution not to raise dust or lint. Begin at the head of bed and fold bedding toward foot in one fold. Then take hold of folded bedding at side, folding in about three folds, drawing the bedding toward you while folding. Place the bedclothes over the back of a chair, which has been previously placed there for that purpose.

In removing pillows from their pillow slips, place them on the bed, and remove pillows without shaking. After the pillow has been covered with a clean pillow slip, take a firm hold of it by one corner, holding it at your side, and give one good shake; then take the next corner; do likewise until all four corners have been shaken. This method brings all feathers to the center, making your pillow light and fluffy and very comfortable to lie on.

After the mattress has been turned, begin making the bed by placing bedding on the bed; unfold from side to side, and from top to bottom without shaking. Make every movement count.

If nurses will follow this routine in bed-making, their soiled linen as well as all bedding to be used will be neatly folded and the room at all times during the operation of bed-making present a neat appearance.

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES.
Dietitian of Lakeside Hospital, Cleveland, Ohio
Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, O.

Food Value of the Banana

At this time, when almost everything in food materials has advanced very greatly in price, it is a relief to buy bananas, as we can get them for practically the same price that we have previously paid for them.

Again, while we are being urged to use fruit and vegetables "in their season," the banana is a source of relief, as it is available in the market in all seasons. It grows best, however, from November to April and is therefore at its best when many other fresh fruits are not so plentiful. It is unfortunate that an article of diet which may be obtained so easily and at such small cost is not given the place it deserves in our dietary, for it deserves much higher consideration than is usually given it because of its nutritive value.

It should be one of our staple articles of diet as, while it is not very high in carbohydrate content, the carbohydrate is in a form that may be eaten either raw or cooked, provided the fruit is thoroughly ripened.

In the green banana this carbohydrate is in the form of starch, but, as the fruit ripens, chemical changes take place, converting this starch into sugars, which are easy to digest, and forming essential oils and volatile ethers which give flavor. The more thoroughly the fruit is ripened the greater is the chemical change, making the banana the more easy of digestion.

The majority of people prefer the banana when the skin is yellow and assume that when it has brown spots it is not so good for food, when, as a matter of fact, it is then that it is best for food provided the skin is not broken. In the yellow stage the starch is still in the raw state and one is eating that which is similar to green apples or raw potatoes. The difference in flavor and ease of digestion between a banana thoroughly ripened and one in which the skin is yellow and the ends still tinged with green is about as great as the difference between a well-baked mealy potato and a potato that is half-cooked and soggy, or even raw.

Green bananas, like green apples, are not wholesome unless cooked, but there is no more reason for condemnation of the fully ripened banana than there is for condemnation of the ripe apple. Even the green banana may be eaten raw if it is masticated thoroughly, but it is much more palatable if baked or fried.

The protein and fat content of the banana is low, but if used as a vegetable with meat or other supplementary foods it forms a ration which will meet the needs of the body. Banana and cereals with cream, or bananas alone with milk or cream, make a very nourishing food for breakfast or luncheon. The banana and potato are very similar in caloric value; though it would not be advisable to substitute either of these for the other entirely, they may be used interchangeably to some extent.

The oninon is considered of value in the diet because of its mineral salts, which are base-forming minerals in the body; apples and bananas have more of these base-forming mineral salts than onions have, and therefore yield the same results in the body.

We are being convinced that in the proper stages of ripeness or when cooked bananas are not harmful for children. Reports from the Department of Pathological Chemistry, New York Post-Graduate School, state that from using bananas in dietetic treatment of patients with nitrogen retention, very satisfactory results have been obtained; Drs. Myers and Rose think that this fruit will be of great benefit in the treatment of nephitis.

The banana has been called the "poor man's fruit" and it has been looked upon as such. But why should it be? Dr. A. H. Hoy says in "Eating and Drinking":

"In this we classify fruits into natural food fruits and cultivated fruits. Under this arrangement will be found marked differences. The first fact is that the natural food fruits are all nourishing and free from digestion-inhibiting effects. The second fact is that those fruits which man has developed from wild, unpalatable varieties, which never were intended as food for man, into edible forms, are likely to produce abnormal conditions of digestion and interfere with nutrition when used as food.

"Let us illustrate this point. The date, the banana, and the fig are true examples of natural food fruits; they are today simply wild fruits. Man has not, by any process of forcing seedlings, cross-fertilizing, or grafting, changed their form or natural composition, or flavor; they are today the same fruits; that is, have the same composition of substances in them as first made by the Creator, and are, as we have shown, admirably adapted to man's use as a food, and are plainly intended for his use as such."

Two undesirable factors in the use of the banana should be overcome; one is the habit of not thoroughly chewing the fruit before swallowing it; and the other, is that the cover which naturally so well protects the banana from contamination is often torn when taking the fruit from the stalk. If we could teach the retail merchant always to cut his bananas from the stalk and thus keep them entirely enclosed in their natural covering, they would be the most sanitary of foods purchased.

Some Valuable Food Bulletins

The Trade and Technical Press Section of the United States Food Administration at Washington, D. C., is sending out weekly bulletins which are very valuable to one who is interested in any phase of our present food and market situation—and is there any one who is not interested? These contain "items from technical journals relating to economics in food, fuel, power, and transportation."

Many items in the bulletins are written in the interests of hotels and hospitals. The following are a few which have appeared during January and February and which touch on subjects of general interest and give us a point of view which differs somewhat from the popular idea:

WRAPPED SUGAR ECONOMICAL

The shortage of sugar has led to a rediscussion of the economy secured by serving wrapped lump sugar, a practice which some stewards report as economical, while others believe that unwrapped lump or granulated sugars are best. The managing steward of a big chain of lunch rooms tells the *Hotel Gazette* that wrapped sugar is most economical in his experience, and gives the following reasons: The cost of wrapping at the refinery is approximately 23 cents per thousand pieces. Many hotels and restaurants using unwrapped lump sugar have doled it

out in small paper bags during the sugar shortage, a method that costs approximately 57 cents per 500 bags, each containing two lumps. Wrapped sugar is not touched by hands, being wrapped at the refinery by machinery. Where a guest uses only one piece of sugar there is no waste, as when two or more pieces of unwrapped sugar are served. This steward maintains that, contrary to general belief, granulated sugar is not as economical as lump sugar in service.

DIET TESTS OF COTTONSEED FLOUR

A series of experiments with cottonseed flour was lately conducted at the University of Texas by Prof. Anna F. Richardson and Miss Jennie R. Bear, of the home economics department, according to the *Manufacturers Record*. Women students volunteered as subjects, and for five days ate a special diet made up of cottonseed flour in combination with corn meal, butter, sugar, and grape juice. Each subject has 100 gm., or about 3½ ounces of cottonseed flour in the form of bread. Results showed an average digestibility for the protein of cottonseed flour to be about 85 percent, placing it in the same class as other cereals and breadstuffs. The conclusions are that cottonseed flour contains a very high percentage of tissue-forming material, and will replace to advantage one-third of the wheat flour in ordinary diet. A bakery in New York City and another in Boston are reported to be regularly using cottonseed flour in making bread.

THE POWDERED MILK INDUSTRY

One of the greatest conservation factors in the dairy industry is found in the manufacture of powdered milk by processes which began to come into wide use about fifteen years ago. The last available census figures for 1914 gives the total production of powdered milk as 20,000,000 pounds a year in the United States, of which New York State made almost half, with Wisconsin second and Michigan third. Nine pounds of milk powdered represents 100 pounds of milk, and all forms of milk, such as whole milk, skim milk, buttermilk, and cream, are now dried successfully, as well as modified milk for infants' food. Dried milk products are in such demand that this country has never had a surplus for export. They are used in baking, ice cream, candy, and other products as well as by families, and offer a method by which a great surplus in a perishable food staple may be turned into imperishable form and held for market.

A SUGAR-SAVING CONFECTION

"Apple allies" are a new sugar-saving confection developed in the red-apple country of the Pacific Northwest by a woman who wished to devise a confection in which the minimum amount of sugar could be used and no butter. This is an apple slice, coated with hard transparent sugar, and the recipe is as follows:

Make a sirup of two cups granulated sugar, one cup water, bring to boil. Have ready one medium-size apple, pared, cored, each quarter cut into three pieces. Drop the twelve pieces in the boiling sirup and allow to cook or boil therein until they are all transparent and tender, easily pierced with straw. Remove from kettle, drain, and place on waxed paper or platter. Allow to remain twenty-four hours, then roll in granulated sugar; roll twice again at intervals of twenty-four hours. If moisture accumulates on the waxed paper renew it. Allow allies after third rolling to remain on platter until dry; keep in dry place thereafter exposed to air, turning from time to time. The amount of sirup stated will make five dozen apple allies, five apples being used. Add boiling water to sirup, as it thickens, to maintain original consistency.

Constitution of the American Dietetic Association

ARTICLE I.—NAME

This organization shall be known as the American Dietetic Association.

ARTICLE II.—OBJECT

To bring about closer cooperation between dietitians and those workers in allied fields in order that more effective work may be done in improving the conditions and raising the standard of dietary work.

ARTICLE III.—MEMBERSHIP

Charter membership shall consist of the active members present at the first meeting, whose fees are paid by April 1, 1918.

ARTICLE IV.—OFFICERS

1. The officers shall consist of a president, first and second vice-presidents, a treasurer, a corresponding secretary, a recording secretary, and an executive committee.

2. The executive committee shall be composed of the president, first and second vice-presidents, corresponding secretary, recording secretary, treasurer, and three additional members.

ARTICLE V.—AMENDMENT

This constitution may be amended at any regular meeting by a two-thirds vote.

By-Laws

ARTICLE I.—MEMBERSHIP

There shall be one class of membership, viz., active.

Section 1. Persons eligible to active membership shall be: (a) graduates of at least a two years' course in home economics, from a recognized school; (b) graduates of a one year's course in home economics (prior to June, 1917), who, following graduation have had one year of successful experience in dietetic work; (c) research workers who have contributed to the advancement of dietetics; (d) practicing physicians in good standing; (e) persons whose special work is allied with dietetics.

Section 2. Application for membership shall be presented in writing to the corresponding secretary and shall be endorsed by at least one member.

Section 3. Membership shall cease upon non-payment of dues only after written notice from the corresponding secretary.

ARTICLE II.—MEETINGS.

The time and place of the annual and special meetings shall be determined by the executive committee.

ARTICLE III.—FEES

The annual fee shall be one dollar, payable at the time of the annual meeting.

ARTICLE IV.—STANDING COMMITTEES

Standing committees consisting of three members appointed by the president, and ratified by the executive committee for rotating term of three years, so arranged that one member be reelected each year. These committees shall comprise the following:

1. Nominating committee shall prepare the ballots.

2. Membership committee shall endeavor to increase the membership, and shall investigate qualifications of applicants, act upon such application and report decision to corresponding secretary.

3. Program committee shall arrange for program for annual and special meetings, submitting such plans to the executive committee for ratification three months prior to date of the meeting.

4. House committee shall have the power to make arrangements for the housing of the association for the annual and special meetings.

5. Additional committees shall be elected or appointed from time to time as the association shall direct.

ARTICLE V.—ELECTION OF OFFICERS

Election shall be by majority of votes cast.

ARTICLE VI.—QUORUM

Quorum shall consist of ten active members.

ARTICLE VII.—AMENDMENT

The by-laws may be amended at any meeting regularly called, by two-thirds vote of those present and voting, provided due notice is given in the call.

ARTICLE VIII.—DUTIES OF OFFICERS

1. The president shall preside at all meetings, and conduct them by a formal order of business, and shall perform the other duties usually belonging to this office. In case of her absence these duties shall be performed by the first vice-president.

2. The vice-presidents shall hold themselves in readiness to assist the president at any time.

3. The recording secretary shall keep a correct record of all meetings, reports of same to the necessary press representatives, and read to the association, minutes of meetings.

4. The corresponding secretary shall answer all letters relating to association affairs, and preserve all papers, also notify all members of special meetings, and of the non-payment of dues; shall keep a correct list of members and addresses, and attend to all other business relating to association membership and documents.

5. The treasurer shall receive, collect, hold and pay out all association moneys, subject to order of the president; also keep a correct account in detail of all moneys received and expended by her, and shall render her report in writing at the anual meeting.

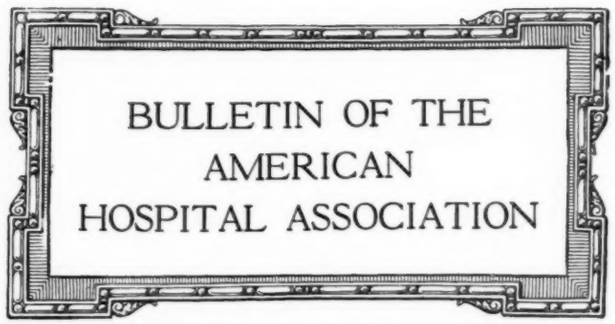
6. Officers shall be elected every year, and shall be eligible to reelection. A vote of members present shall be necessary to an election.

Few people realize the important part which the teeth play in the process of digestion, and comparatively few people give their teeth proper care.

Particles of food may lodge between the teeth, which, if allowed to remain there long enough, will ferment. Organisms present in the mouth, together with this fermented food, may form a deposit on the teeth; or a deposit may be formed consisting of these bacteria of the mouth, epithelial cells, and calcium carbonate, which is known as tartar. From these deposits on the teeth an infection of the mouth, throat, or nose may result; possibly causing tonsilitis, quinsy, or similar difficulties.

A habit of thoroughly cleansing the teeth lessens the danger of tooth infection or pyorrhea. Observation in the clinics of some of our larger hospitals, as well as elsewhere, leads us to believe that many gastro-intestinal disorders may be traced to neglect of the teeth. Mayo evidently has proved to his satisfaction that ulcers and cancers of the stomach and duodenum are due to dental neglect or infection. Another authority says that 80 percent of cancer of the stomach patients have pyorrhea with chronic gastritis before the cancer develops.

With decayed or defective teeth the food is not properly masticated. It is obvious that if the food is not thoroughly chewed before swallowing it is not as finely divided as it should be in the stomach. The digestive juices cannot penetrate the large particles of food completely or quickly, digestion is retarded, and food remains longer in the stomach than it should. Before it becomes acid, bacterial action may cause decomposition to begin, which continues in the intestines. Products of fermentation enter the blood, causing fatigue and headache. If the habit is persisted in, as it usually is, constipation or some form of indigestion follows, which may lead to more serious diseases.



Monthly Bulletin issued from the Executive Offices
728 Seventeenth Street, N. W., Washington, D. C.
WILLIAM H. WALSH, M. D., Secretary.

War Service Committee

A representative of the committee has been at the office of the association in Washington at least two days in every week in order to keep in touch with the military situation so far as it affects hospitals, and the chairman has had frequent correspondence and interviews with the War Department with regard to hospital matters.

The answers to the questionnaire issued in December have been compiled and reports filed with the Surgeon General's office and the National Council of Defense.

Unfortunately, a very considerable number of hospitals failed to reply, and, as the information gathered was for immediate use, there was not time to follow up the delinquents. The material gathered was sufficient, however, to present a picture of the present situation which is valuable.

The field of inquiry represented 858 hospitals and 777 training schools, with a normal staff of 3170 interns, of whom 868 were already in war service, and a visiting staff of 17,548, of whom about 4000, or 24 percent, were already in service or on call. This represents practically all the hospital physicians who are available for war service after taking into consideration age, infirmites, unavailable specalties, and duplication of appointments, and exhibits a very generous response by the medical profession to the call of the military authorities.

Remarks received on the intern situation are interesting. A few indicate at least cheerful resignation, as: "At present no difficulty"; "Doing quite well without Army"; "Would as soon have fourth-year students as graduates." Generally, however, the remarks as well as the figures indicate a serious condition, as: "The situation is maddening'"; "Deep gloom"; "Embarrassing"; "Deplorable"; "All taking situation seriously."

Many hospitals are using medical students, but it is said they are unsatisfactory "because of breaking up of time for necessary school work." Other hospitals are employing women physicians, but this source of supply is approaching exhaustion, as indicated by the following: "Although our interns have always been women, we feel the shortage due to war."

While most hospitals reported depletions of a considerable proportion of their interns, over 50 had been entirely deprived of this service. One respondent tried to summarize the situation as follows: "All good interns are in France."

A meeting of the war service committee was held in the office of association on February 7. The chairman reported interviews and conferences with the War Department indicating that the plan of using civilian hospitals for military purposes was receiving consideration by the department. The committee, in accordance with the reso-

lutions adopted by the convention at Cleveland, has been urgently advocating such a scheme.

It was noted that the situation with regard to the drafting of interns is not yet satisfactory, but that in confidence that condition will gradually be improved through the action of the Surgeon General's Office, no further action is necessary at the present time.

It was also decided to suggest to medical schools the advancement of medical students to internships, with the cooperation of hospitals, as rapidly as possible in order that they may have the benefit of hospital experience as fully as possible and be the better prepared for military service where required.

Suggestions for Conserving Food in Institutions

The following letter has been received from the United States Food Administration:

"In response to your request for information concerning food conservation in institutions, we would say that we have a committee working on this problem and we hope that this committee will be able later to give very detailed and definite information as to the help the institutions should give. In the meantime we would make the following suggestions:

"I. Appoint some member of your staff to make a study of the way in which food is used in your institution.

"A. Desirable characteristics of the person selected.

"1. Trained in institutional work.

"2. Acquainted with measures adopted by some foreign institution for food conservation or ambitious to acquire this information.

"3. Trained in nutrition and dietetics or ambitious to acquire a working knowledge of this subject as rapidly as possible.

"B. Duties of the person selected. In consultation with the hospital housekeeper, she should have the following duties:

"1. A scientific feeding of theinmates of the institution.

"2. A knowledge of market conditions.

"3. Responsibility for knowing the food administration measures and devices.

"4. Checking up stock cards for comparison.

"5. Elimination of waste in the institution through careful buying, carefud preparation, careful serving of leftovers.

"6. Instructing the help in the seriousness of the food situation and their responsibilities for service.

"7. Plans for making a study of waste.

"II. These specific directions for conserving food should be followed in your institution:

"1. Do not use meat oftener than once a day.

"2. Observe one meatless day each week.

"3. Use less beef, mutton, pork, ham, and bacon.

"4. Fish may be used.

"5. Replace meat with milk and cheese, or make meat go a long way by using it with other foods as a flavor.

"6. Use nuts and legumes, and whole cereals supplemented with milk, cheese, and eggs to replace meat. (With the exception of the soy bean, none of the legumes, nuts, or cereals are good meat substitutes, unless supplemented as directed.)

"7. Use soy beans to replace part meat, because it has been recently determined that soy beans may be used successfully in this way.

"8. Use less wheat and more corn and oats. Wheat-saving breads can be made by substituting 25 to 35 percent corn or oats for wheat. These will be entirely digestible if the corn or oats are made into a thoroughly cooked mush before being combined with other ingredients in bread-making.

"9. Observe at least one wheatless day each week.

"10. If possible, plan not to use any white bread until the close of the war. This will be possible only if you are able to devise ways in your institution of making acceptable war breads which are readily digested.

"11. Utilize all stale bread. Old bread may be ground to a powder and used to replace 25 percent of the flour in making fresh bread.

"12. Use more potatoes and fresh vegetables.

"13. Do not use more than three-quarters of a pound of sugar per capita per week. Molasses, corn sugar, corn syrup, honey, and sweet fruits and milk will supplement sugar in the dietary. Sugar is a palatable, desirable, but not necessary food. If one part of honey is mixed with two or three parts of corn syrup, an acceptable sweetening mixture may be produced.

"14. Economize in the use of fats by decreasing the use of fried foods, by making pastries containing one crust, by reducing the consumption of cakes and rich breads, and by preventing any waste of fat in the institution.

"15. After meats are purchased, these should be trimmed with great care to remove the fat before cooking and prevent its loss on the plate after serving. If the meat is improved by being cooked with the fat, the fat may be trimmed before being cooked and may be cooked with the meat and recovered as drippings.

"16. All waste fat should be utilized directly or indirectly for soap making.

"If you wish to be sure that the individuals in your institution are being efficiently fed, the following suggestions may be valuable to you as a guide:

"Not more than about one-third of the total protein of the day's meals need be served as animal food. A glass of milk, an egg, two ounces of meat, or one ounce of cheese would give sufficient animal food.

"One-third of the protein should be furnished by some cereal food, and wheat bread, cornmeal, oatmeal, or other cereal. Nine slices of bread, or one cup of cornmeal, or two cups of rolled oats give approximately this amount. Part of each may be used.

"The remainder of the protein should be furnished from mixtures of the following foods: legumes, nuts, vegetables and fruits."

A new curriculum for the training of nurses at the University of California was approved by the California State Board of Health at a meeting held recently. The new plan allows a 3-year course in the university, to be followed by two years in the training school at the University Hospital, in place of the three years in the hospital formerly required. It also provides than one year's credit will be given to women graduates of the University toward a three-year nursing training course in the hospital. The same kind of an arrangement is in effect at Stanford University.

Opportunities do not come with their values stamped on them.—Maltbie Davenport Babcock.

INDUSTRIAL REHABILITATION OF DISABLED SOLDIERS AND SAILORS

Conducted by ELIZABETH G. UPHAM,
Director Art Department Milwaukee-Downer College.

The Problem of Rehabilitation

The great war is calling the attention of the world to the tremendous problem of rehabilitation. The experience of all the belligerent countries has proved conclusively that the best of medical treatment cannot, in all cases, bring about complete restoration. Medical science may enable the patient to physically perform certain duties, but it cannot make a productive citizen out of him if he has become institutionalized during convalescence so that mental and moral deterioration have actually taken place. Rehabilitation completes the purpose of medicine and surgery and makes possible the adjustment to economic life.

Realizing that rehabilitation is a new and special science, that it is a distinct and separate field of service from nursing or medicine, but is, nevertheless, a hospital problem, THE MODERN HOSPITAL is opening, in this issue, a new department entitled "Industrial Rehabilitation of Disabled Soldiers and Sailors."

While the war emergency of providing for the men returning from the front is imminent, the fundamental principles of rehabilitation apply equally to the civilian cripple and the industrially handicapped, who not only exist at all times, but, in reality, far outnumber the victims of war. In 1913 the number of serious industrial accidents involving more than four weeks' disability was estimated at 700,000. In spite of the safety movement, accidents have increased since 1913 with the larger production, longer hours, and greater numbers employed. On a basis of a million men overseas and the Canadian estimate of 10 percent of the men returned disabled for service, 100,000 is only one-seventh of those invalided by industrial accidents. In 1910, in the United States, 1,953,000 patients were treated in public and philanthropic hospitals and 2,440,000 were treated in free dispensaries. It may be readily guessed what proportion of the industrial efficiency of these 4,393,000 patients might have been increased, if not actual dependency prevented, by rehabilitation.

The Department of Industrial Rehabilitation will attempt to analyze the various medical, social, and economic phases of the problem, giving the experiences of foreign countries, progress in our own, and summaries of legislation and conferences relating to this great work.

The subject of rehabilitation is so tremendous and so closely bound up in the nation's responsibility of caring for the men as provided in the war risk insurance bill and the preparations of the Surgeons General of the Army and Navy that the entire problem is now before Congress. The Senate within the past two weeks has passed resolutions calling for such information bearing upon the rehabilitation of disabled soldiers and sailors, as the War Department and Federal Board for Vocational Education could furnish.

With the wealth of experience the belligerent countries have gained, America may enter the war fully aware of the fact the best medical, nursing, and rehabilitating care will be given her men from the wounding in the trench to their final placement in industrial, commercial, or agricultural pursuits. "No man need be a cripple unless he wants to be," "No more soldiers' homes; each soldier has his own home," and "Preparedness for after the war" are the modern slogans, not only for the welfare of those who have risked all in service, but for the period of reconstruction to follow.

While the war has enriched the world's knowledge of the need for rehabilitation and has established certain methods and proved the value of occupational therapy in long convalescence, it must be remembered that occupational therapy is not a new subject, and that serious attention was given to it before the war. Its sudden prominence has been due to its recognition as an indispensable factor in the rehabilitation of war victims. It is therefore fitting that the first number of the Department of Industrial Rehabilitation of Disabled Soldiers and Sailors should contain a brief account of the study and place of occupational therapy before the war, and its possibilities of development. The following is therefore quoted from Senate Document No. 167, entitled, "Rehabilitation of Disabled Soldiers and Sailors. Training of Teachers for Occupational Therapy":

"Occupational therapy is neither a new movement nor one which has suddenly come into prominence through a spectacular publicity campaign. It is, rather, a movement which has gradually developed by justifying itself over a long period of years. It was initiated by the doctors in insane hospitals who first dared the experiment of putting their patients to work, and by those other doctors who were groping after something which might give to their neurasthenic patients a healthy interest and a new grip on life. The healing value of occupation is so well established that occupational therapy is no longer confined to the insane or neurasthenic but has been found equally beneficent in tuberculosis, in long orthopedic treatments, and in extensive convalescences in a general hospital.

"The crafts with their variety and scope are well adapted to the needs of the occupational therapeutist. A craft is quickly learned, the equipment is simple and inexpensive, and varying degrees of mental or physical exertion are possible. Art and craft are closely interwoven, and art especially affords a channel for self-expression, which is in many cases the keynote of the success of occupational therapy. There is in the crafts just that poise, opportunity for creation, and interest in execution which on a first glance seems to counteract strain, overspecialization, and the monotony of the factory system. It is not strange that those doctors who see the disastrous by-products of modern industrialism should favor the crafts and simple hand industries as occupations well fitted for the hospital workshops. Occupational therapy has justified itself purely as a medical agent and has proved beyond a doubt the value of occupation as a therapeutic measure. The crafts have met all the therapeutic qualifications of occupations and the tendency has therefore been to consider them the logical channels of expression and to require a knowledge of art and craft in the training for teachers.

"Occupational therapy has up to the present made no pretense to provide vocational training. Yet the instruction received during convalescence has been of direct economic value to a few patients who, after a hospital experience, have been better equipped for earning their living. The children's teacher in connection with the City Hospital of Cincinnati gave instruction to several convalescing young men, with the result that they secured better positions after leaving the hospital than they had held before, and a few even passed civil-service examinations. The reason that these cases are as rare as they are may be partly due to the fact that the institutions which have

adopted occupational therapy are not, as a rule, those to which the workingman goes, unless he be tubercular or a chronic invalid. With the possible exception of Massachusetts General Hospital, the City Hospital of Cincinnati, the Bloomingdale Hospital, the Philadelphia General Hospital, the Cook County Hospital (Chicago), the Latter Day Saints' Hospital, Salt Lake City, and a few others, they are either private sanitariums, dependent upon paying patients for support, or else county, municipal, or state institutions for chronic invalids or insane, dependent upon public support.

"The patients in the private sanitariums are largely drawn from the leisure or professional classes. Although a few of these patients may later earn their living as craftsmen or craft teachers, none of them will, in all probability, enter the trades. For these patients the crafts prove a resource and meet all the needs of the occupational therapeutist. On the other hand, the majority of the patients in public institutions are so chronically subnormal that there is little hope of their ever engaging in competitive industry. The crafts are palliative for these patients; they help to maintain discipline, and, in some instances, they enable the patients to earn something under direction.

"Thus it is that the two types of institution which have largely adopted occupational therapy are not those in which the loboring classes convalesce. With the exception of a few striking cases of patients who have found their occupational training in the convalescing shop to be of economic value, the majority of the patients of the laboring classes who have had occupational therapy during convalescence are rarely able to make any practical use of craft training, and consequently either return to their former trades or to new unskilled or semiskilled trades. If they do follow their craft training, their future is somewhat precarious, for in such cases they are dependent, in a large degree, upon the fickleness of markets, upon fads, or upon the generosity of the public.

"The present limitations of occupational therapy are, first, overproduction of certain articles dependent upon an unstable and varying market, and second, failing to offer training of economic value to the convalescent workingman. In order to study how occupational therapy may, while retaining all of its therapeutic value, at the same time reach and benefit all classes to the fullest extent, it will be necessary to analyze the purposes of occupational therapy. It is, of course, impossible to cover the specific occupations and technic of teaching for each handicap, as the range of disabilities is wide, varying from the most obvious deformity to the subtlest psychosis and neurosis. There are, however, a few general principles common in the teaching of all. Occupational therapy aims first to create a wholesome interest in something outside the patient's morbid interest in himself and his symptoms; second, to fill the unoccupied portions of the patient's day; third, to prepare his mental attitude so that he may adjust himself to normal demands and environment after hospital discharge; and, fourth, to facilitate medical treatment by regulated exercise.

"These results may be achieved by a large variety of occupations, and many practical vocations are quite as instrumental in accomplishing these as the crafts. For instance, soldering tin cans, joints, wire, tinsmithing, and electric wiring involve many of the processes used in metal craft, and the manufacture of leather goods, bags, belts, travelers' cases, and fancy commercial articles may be quite as interesting as hand tooling or illuminating. Bookkeeping, salesmanship, general education, stenography, telegraphy with bedside ominigraph may serve all the purposes of raffia work, tying knots, or other invalid occupations. Furniture making holds many of the possibilities of manual training and wood carving, while the study of the gas engine, motor mechanics, and construction work has an endless number of possibilities. Commercial design, architectural drafting, sign painting, lettering, and printing have many points in common with fine arts, drawing and painting, or stenciling and block printing. If the hospital is in the country or where patients come from rural communities, lectures and demonstrations of soils, principles of farm management, and sanitation of the dairy may pass many a weary hour. Wherever possible, practice in the hospital garden, poultry yard, or orchard should engage the prescribed exercise as well as games and walks. Such activities will meet all the requirements, namely, divert the patient's attention from himself, fill his unoccupied time, give him a wholesome mental attitude, and regulate his bodily activity.

"There are, however, real dangers and drawbacks in introducing such work into the hospital curriculum: first, the danger of the choice of the wrong occupation; second, the danger of the wrong presentation of the right occupation; and third, the harm of keeping the patient in touch with the same occupation, whose technicalities have possibly been the very grind and monotony which may have contributed to his breakdown.

"The choice of the wrong occupation may have disastrous consequences, as a sound phobia would be intensified by telegraphy, nervous exhaustion increased by the close application of shorthand or bookkeeping, rheumatism accentuated by many of the strained positions of gardening, and the cardiac patient positively in danger in a machine shop with belts and possible uneven muscular exertion.

"If the right occupation is selected, any therapeutic value it might have had may be nullified by failure to arouse the patient from his apathy or by overstimulation and exertion. It must be constantly borne in mind that the patient is temporarily or permanently subnormal, that he is unfit to acquire training in regular channels, that he comes to the hospital primarily to recover, and that all other benefits must remain entirely secondary to this.

"These two dangers exist no more for practical occupations in the hospital workshop than they do for the so-called crafts. The success of occupational therapy does not lie in any particular craft or trade, but rather in the skill with which it is selected for the particular disability of the patent, and the technic of allowing the patient's reaction, temperament, and fatigue to form the basis of teaching.

"The third danger applies strictly to practical rather than to semiesthetic occupations. When the occupation can be so taught that it is not a repetition of the grind that the man has been subjected to, but rather opens new possibilities to him and increases his earning power, it is not to be weighed in the balance with a mere resource, which in all probability the patient will never have time or means to enjoy. The further enriching of the patient's background by better education, by practical resources, and by a knowledge of hygienic living, renders his convalescing of lasting value."

The experience of the belligerent countries has amply demonstrated the greater value of the practical occupation for the convalescing men. They respond far more quickly to an occupation which is "a man's job" and leads to future usefulness. The Germans have wasted no time on raffia and uselss crafts, but have applied the simple occupation remedy to work of a practical type. A blow pipe of a light kind was devised for the handicapped man and Germany as early as 1916 had 20,000 of her cripples called "Kautny's Army" all trained to be expert oxyacetylene welders. By the aid of *Arbeits-therapie* it is claimed that Germany uses 85 to 90 percent of her disabled back of the lines, and the majority of the remaining 10 to 15 percent are entirely self-supporting. Occupational therapy is used in Austrian hospitals. Belgium was the first of the allied nations to provide systematic occupational treatment; reeducation centers in France are under the direction of the Office Nationale des Mutilés et Reformés de la Guerre. Great Britain has established hospital workshops as a regular part of hospital equipment in England. The report of the Military Hospitals Commission of Canada, May, 1917, says: "Before the vocational education was introduced, many of the men dreaded to be discharged and cut off from military pay and allowance, but since the classes have been well established, some men who have gained new wage-earning ability from their acquired technical knowledge, often welcome their discharge, and boldly step into better positions than they ever occupied before." Australia and India have provided courses of reeducation. New Zealanders are trained in England in many cases,

while still undischarged from the army. A special institution is established near London for training disabled South Africans. Italy is training her disabled agriculturists to use a motor tractor instead of the plows, little changed in type since the time of Virgil. In Russia, it is said, provision has not been made for reeducation, and a pathetic and not infrequent sight is the disabled soldier begging in the streets.

The war has taught the value of practical training and shown vocational opportunities, and the economic adjustments possible for the disabled. It marks a new conception in the scope of occupational therapy and its future development is destined to include all classes and types of long convalescences, and not only assist in curative treatment, but take cognizance of the industrial world and prepare the handicapped, so far as possible, to become independent economic units.

What Shall We Do for Our Crippled Soldiers?

BY JOHN S. DENNIS, Colonel Second in Command, British Canadian Recruiting Mission in the United States, Western Division; Chief Commissioner, Canadian Pacific Railway.

It is interesting and gratifying to note the application of thought and skill with which Canada is undertaking the great problem of caring for those of our soldiers who have received injuries in the battles against the Huns. Napoleon would change his opinion that "republics are ungrateful" could the "Little Corporal" learn of the plans now being worked out for the care and retraining of our boys who are returning crippled and maimed from the trenches of Flanders and Belgium, so that they will be able again to take their places in the ranks of self-supporting soldiers of industry.

We have only to turn back to the history of the Civil War to learn the reason for Napoleon's declaration. The

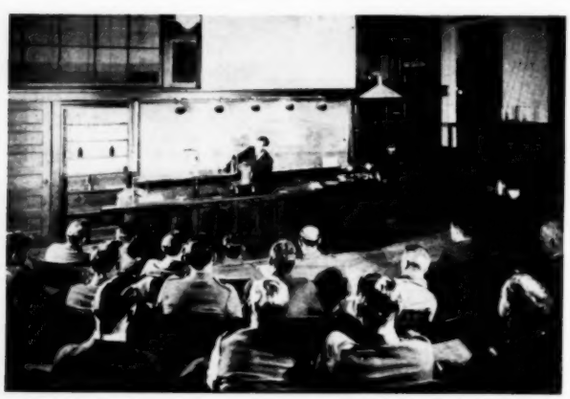


Fig. 1. The Provincial Institute of Technology and Art at Calgary, Alta., has been turned over entirely to the retraining of returned soldiers. This picture shows the class in gas engine and automobile mechanics having a lesson on static electricity.

maimed veterans of the Union army were received as heroes, banqueted and feted, provided with artificial limbs, consigned to the class of public charity, and all too soon permitted to drift into the almost hopeless battle for a livelihood in a world that promptly forgot their heroic deeds. Little wonder that almshouses under the name of soldiers' homes were soon found necessary in every section of the country.

Canada is going about this great problem in an entirely different manner. The Military Hospitals Commission has inaugurated the principle that it is as much the duty of the state to prepare the crippled soldier for the battles of civil life as it is to provide him with the proper medical and surgical care for his injuries. Vocational training, even during the period of convalescence in the hospitals, has already demonstrated the wisdom of this plan. Many men who have suffered such severe losses as that of an arm or a leg or the sight of an eye have been enabled, through the training provided under the commission's direction, to earn a better living than before they enlisted for overseas.

But so far Canada has only worked out the test, as efficiency men say. It has been demonstrated that vocational training of our crippled soldiers is an economic saving to the body politic—that their value to the state is greatly increased, and that, in place of being public

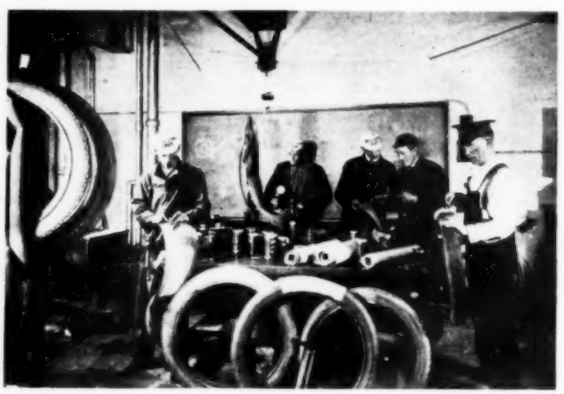


Fig. 2. Two men who took the course in automobile mechanics at the Provincial Institute of Technology and Art at Calgary, have reenlisted in the motor transport, one as a sergeant in charge of the repair work. These men suffered from abdominal wounds, and, while skillful surgery resulted in a very satisfactory recovery, they never will be able to do heavy work again.

charges, they can be made independent and self-supporting. There is an insistent demand for a broadening of operations, however. The Military Hospitals Commissions and the provincial commissons have not as yet been able to handle all cases promptly. We cannot blind ourselves to the fact that we shall have a much larger number of charges yet to care for. Were the maimed and crippled from the Canadian army now in the hospitals in France and England to be suddenly transported to our shores we would be literally swamped with patients and could care for but a small percentage.

This enlargement of the scope of this work should not be undertaken upon a temporary basis. It will take time to properly train these men. Some will be more adept than others. But the initial investment required to build training schools and homes will bring a big return during the years to come.

At the present time the United States maintains nine national homes for disabled soldiers, which were erected at a cost of $6,771,427. The number cared for in these homes is upwards of twenty-five thousand yearly—mostly disabled veterans of the Civil War, which was ended more than fifty years ago. In addition to these national homes, practically all of the Northern states maintain state homes for disabled soldiers, in which a total of some twelve thousand veterans are cared for annually. These homes are practically almshouses with Federal and state governments providing the maintenance.

No attempt was made in establishing these homes to train the maimed so that they could overcome the handicap of their injuries. The loss of an arm or limb or an eye was considered of such a permanent nature that the patient must be cared for as a public charge for the balance of his life. Perhaps this was because of the lack of knowledge of the possibilities of vocational training; per-

haps it was but the shifting of government responsibility. It must be said, of course, that not all disabled soldiers of the Union army entered these homes. There were many who fought out their individual handicap and finally succeeded in training themselves to fight life's battles successfully.

Let us assume that Canada invests one-half of the money in so-called soldiers' homes that the United States did, roughly, $5,000,000, and that we started out to make these homes technical schools as well as hospitals. How

Fig. 3. The chemistry of gases and of electric batteries is a part of the course in automobile and gas engine mechanics at the Provincial Institute of Technology and Art at Calgary.

many lines of industry could eventually be supplied with trained workers from such a source! Canada needs skilled farmers to wrest the wealth that nature has so abundantly stowed away in our prairies, or even in the farms of the older settlements of Quebec and Ontario. What better way for the state to provide these expert farmers than to educate as many of these disabled soldiers as show a leaning toward agriculture?

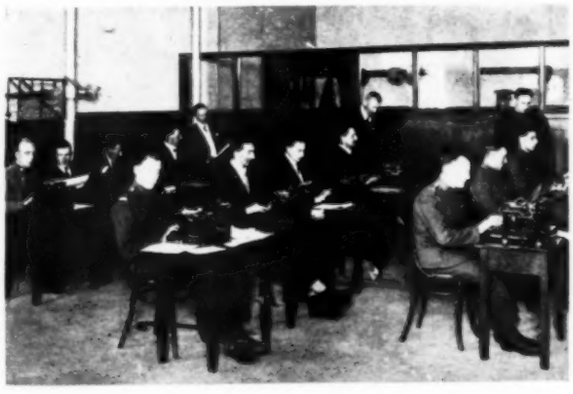


Fig. 4. Classes in typewriting and stenography are popular with men whose disabilities are such they are unable to stand any sort of outdoor exposure. One young man suffering from chronic bronchitis due to exposure in the trenches received instruction in bookkeeping, stenography, and typewriting, and now has a position in the Dominion Forestry Department at a salary of $100 a month.

There is too much haphazard employment at the best of times; and with the flood of men having to be placed simultaneously, there is a greatly increased danger of shoving them into places without regard to suitability. Putting square pegs into round holes does not pay. We must use brains and ingenuity in forming our plans for doing the best that can be done for and with the returning men. Good people often say to them, "Nothing is too good for you." It is easy to talk like that, in vague generalities, but we have got to come down to particulars and find out in detail what is best for the men—yes, and for each particular man, with his individual capacities and aptitudes.

Surely the soldier who has risked his life and lost his limb or has been otherwise disabled deserves the very best that the state possibly can give him. It is not charity—but justice. The productive value of these retrained soldiers will be an addition to our assets rather than a charge and a liability.

During the fifty years since the Civil War the United States has paid out more than a billion dollars in pensions to veterans and their dependents. No one can deny the duty of the state to provide for the disabled soldiers. The pension is but a partial payment of the debt to the disabled hero. The debt includes, as well, all possible help so that he may, with the assistance of his pension and the special training in suitable vocations, be able to provide as well or better for his family as he could have done before he volunteered his services in defense of the Empire. This, like all other assistances, however, merely puts the man in a position to compete on an equal footing. He is in a better position to fight the "battle of life." But, no matter how much the state helps him, it is up to the man himself to make the best use of the advantages and to succeed.

The Surgeon

With Apologies to "The Sergeant."

Who is that man alert and keen
  With ears pricked up and body lean
With movements like a Ford machine?
  Why, sonny, that's the Surgeon.

Who drills with litters all about,
  "Fours" right and left you hear him shout,
Who looks as though he had the gout?
  Why, bless you, that's the Surgeon.

Who makes you strip and counts your ribs
  And calls your heart and liver his?
Has pills and powders on his phiz.
  Of course, sir, that's the Surgeon.

Who carries all the Army lace
  And looks for dirt in every place
And then reflects it in his face?
  Why, sure, that is the Surgeon.

Who sings a song of sanitation,
  Bugs, beetles, lice, and vaccination,
And talks about some ulceration?
  You got me, it's the Surgeon.

Who filters water, airs your bed,
  Insists on drafts upon your head,
And disinfects you 'til you're dead?
  Why don't you know, the Surgeon.

Who tells us that the Demon Drink
  Puts man completely on the blink,
Then pours a slug that makes you wink?
  You know! It is the Surgeon.

Alas! he has to do or die.
  Sometimes I wish he were on high,
But when I'm sick I sigh and sigh
  And quickly call the Surgeon.

—Lieut. W. O. Wetmore, M. R. C., in Jour. Am. Med. Assn.

THE WAR: ITS HOSPITAL, MEDICAL AND NURSING ASPECTS

FROM THE TRENCHES TO THE BASE HOSPITAL

How American Soldiers Are Cared for From First-Aid Post to Base—A Vivid Story by an Eyewitness

BY REGINALD WRIGHT KAUFFMAN, Special Correspondent of the Philadelphia North American and Accredited Correspondent With the American Army in France.

THE AMERICAN CAMP, Somewhere in France, Jan. 26.—It was as if we were in the cleft of an iceberg. Ice varnished the clay-cemented logs that walled our narrow trench; when either of us crouched a little lower into the freezing mud of the floor a crust of ice broke under us; from the narrow strip of sky overhead the stars, which seemed close enough for plucking, hung like so many icicles. For a long hour there had been no sound save the occasional crackle and tinkling of ice—we might have been alone upon our berg in an arctic sea.

"I'd rather like to know," I whispered—at night you always whisper in the trenches—"I'd rather like to know what it's like when a shell explodes in a dugout."

Whang!

A couple of hundred yards on our left the blackness blazed into sudden fire and instantly left us in blinding dark.

"Well," said Bill, "you've come to a likely place to learn."

My aching fingers could almost have touched the boy had the cold permitted me to stretch out my arms, and yet he was only just discernible.

Only just discernible and scarcely to be recognized for the American infantryman. In any cantonment from that at Ayer, Mass., to that of Anniston, Ala., the rawest reserve officer would have censured him, for his uniform had suffered the sea change that every one of our uniforms is suffering over here. The familiar service hat had been replaced by a fore-and-aft cap that covered his ears; a Red Cross knitted muffler hid all the lower portion of his face; he had raggedly cut off the skirt of his overcoat to his knees; when he worked his toes to stimulate circulation water gurgled in his broken boots. . . .

The shrapnel increased, and then there was a minute's lull.

"Now for the big show," said Bill.

I meant to ask him something. Perhaps I did ask it. I don't know. I don't even remember the tremendous bang that must have succeeded when the heavens seemed to split open and come tumbling down upon my head. . . .

". . . he's all right. . . . It fell in the next trench. . . ."

A man with a Red Cross brassard was bending over me.

"Look here!" It was another man with a brassard that now spoke. "This fellow's got his!"

It was Bill they meant. I caught broken phrases about a broken left arm and an abdominal wound, a request for a first-aid pouch and then the clear order:

"Stretcher this way!"

Out of the communication trench two more men trotted with a stretcher. On it they placed the inert thing that had been Bill, and with it, I following, they staggered, stooping behind clay mounds log buttressed, slipping and stumbling through the mud, now and then another shell blazing and bellowing close at hand.

We paused in a roomy dugout, where a surgeon was examining, by the light of a carefully shaded lantern, one stretcher's burden after another. Antitetanus serum was administered, a splint was applied to Bill's broken arm and some sort of temporary dressing to the torn abdomen.

"Field hospital," ordered the surgeon.

I saluted him. Bill, I said, was my friend. Might I—

"Go along with him. It will save us an orderly" . . .

The field hospital was a blaze of light, through which, attended by nurses and orderlies, another surgeon made his way between rows of the wounded. Gleaming knives cut blood-stiffening uniforms; rapid examinations were made; each patient was tagged with a card ordering what should be done with him.

"Hypodermic," said the new surgeon, when he came to Bill. . . . In five minutes a sleeping Bill, tagged for Base Hospital No. 18, was being lifted into an ambulance.

"So long," the driver said. "I'll see you at the rest station."

I heard him swearing softly as he cranked the reluctant motor. The ambulance trembled and lurched. I clung to the edge of the rear, and we lumbered into the dark. . . .

We reached the rest camp. Red Cross nurses came out with hot soup and coffee. We gulped them, the chauffeur and I; we gave as much as was safe to Bill and his living companion—we hurried on our way.

And so, at last, the winter sun rose. . . .

It was two hours past the meridian when we passed a sentry and entered the large gate.

"Say, is this a hotel?"

It was Bill's voice speaking. He must have been conscious for some time.

"No," I said. "And you mustn't talk."

But I knew we had come to Base Hospital No. 18. In the American trenches Bill had been wounded at 1 a. m. of a Saturday; by 2 p. m. of Sunday he was arrived at a perfectly equipped hospital, half a hundred miles behind the lines.

They didn't look unlike the grounds of a summer resort hotel, the grounds of that institution. Up on a hill stood the handsome old chateau with its carven doorway, with its armorial bearings and the motto, "Dei gratia sum quod sum"; gardens stretched, acre after acre, all around it. But a close glance showed that the war had converted it to a more useful purpose. Fifty new buildings had sprung up around the old ones, and buildings still newer—enough, I was afterward told, for a thousand more beds—were in process of construction just beyond the farthest wall.

I paused to make to a waiting young intern my report of our journey. Then I followed Bill to the room where they had carried him. He was in a frightful condition. For a week he had lived with death. He was mated to mud and familiar with filth. Caked with blood and clay, he was taken to a rude bunk. Nurses in speckless white removed his clothes. He was shaved; he was given the

luxury of a warm bath; he was wheeled into another room for the diagnosis.

"What becomes of his clothes?" I asked the intern. "Do you burn them?"

"Not much," he told me. "This army can't afford to waste uniforms. The British run hot irons over the seams—that's where the bugs live—but we use sulphur. We've got a huge fumigating plant; you must have passed it on your way in—we can put three mattresses into it at a time—three mattresses and six men's week's washing. Have to—there's no sun here in winter, and we must do all our drying by artificial heat. We even dry our wood by piling it around the outside of that boiler."

He had his pride and his grievances. The hospital had existed through its first couple of months without ambulances; it possessed no trucks of its own, even now, and not a single limousine—not so much as a runabout; the washing had all to be done by a pair of those miraculous French laundries on wheels, into which you throw dirty clothes that come out clean—miraculous, that is, but rather too greatly taxed in 'present circumstances; the place had been taken over from our Gallic allies only half developed, and yet—well, look at it! There was a capacity of 736 which, when the messrooms were turned into wards, as during last week's rush, could be stretched to 800; at this moment 681 patients were being cared for without the slightest strain upon resources; the institution was as first rate as any in America.

"The number of patients is changing all the time," said the intern. "I've known it to jump from 400 to 700 in two days without warning. And you can't count on orders. One night, a week ago, we got word to get ready for 160, and at 2 a. m. there were ambulances with 201 at the door."

While he was talking we were following Bill.

It would be all right, they told me. The broken arm was nothing, nor the superficial wounds on it; as to the abdominal injury, thanks to the fluoroscope and the nitrous oxide, a stay here under treatment and then a rest at one of the Red Cross convalescents' camps by the seaside would fit Bill for a return to the trenches long before our army should enter in force. . . .

Bill was in safer hands than mine. I felt free to look over the hospital.

Well, there are sixty-two Red Cross nurses at this place. They are cheerful, obedient, brave, and competent. . . .

"My girls," the head nurse told me, "sleep with their gas masks beside their beds—when they get time to sleep at all; they are on duty for just as long as efficiency will permit. They're often in the wet, they're generally in the cold, and they're always cheerful. I haven't heard a syllable of complaint since I came here." . . .

I left her and returned to the cot on which my trenchmate lay. His eyes were still closed, but he was breathing easily.

On his left lay a patient that, to judge from his conversation, had been a patient here for a long time. He was giving gratuitus advice to the soldier on the other side of him.

"You don't have to do here like you do in the camp," he was saying. "I mean you don't have to wring out your underclothes at night and put 'em between your blankets and sleep on 'em, so's the blankets 'll act like blotters and soak up the rain out of 'em. But you won't want no pajamas, either—these here Red Cross sweaters that the ladies knit back home, they're as fine nightshirts as they are overcoats."

Bill, as I'd noticed, has a way of regaining consciousness unexpectedly. He regained it now. His eyes were on me, and his first words were a question:

"Well, say, if this ain't a hotel, is it a rest camp?"

The veteran answered him before I could:

"Naw," said the veteran, "this ain't one o' them waystations on the road back. Not much, sonnie—you're home at last."

FRIENDS OF FRANCE*

The Field Service of the American Ambulance Described by Its Members

"Friends of France" is a collection of plain narratives, told in a matter-of-fact way by young American university men without any attempt to be sentimental, but the whole atmosphere of the book is so charged with the pure sentiment of patriotism, sacrifice, and splendid courage that the simple telling of the story will wind itself around your heartstrings.

The most striking thing about the book is the picture we get of France, wounded but undaunted, bleeding, but determined to fight to the end, and with it all, cheerful, courteous, and appreciative of the work these American boys have done, trying to balance in a way, the debt we owe. Mr. A. Piatt Andrew, the inspector general of the field service, has gathered together letters and stories written by the *ambulanciers*, each man from his own experience. The man who tells of Dunkirk and Ypres

writes in Kipling fashion what seems to be the impression all through the book our boys have of the *poilus*. "We saw them, quiet and busy in the silence and darkness beside the Yser, in the ping and whine of many rifles, and again we saw them on straw in dim-lit stables, bloody and silent, but not defeated. They gave us tobacco and helped us tinker our cars, and again they died in our ambulances and sometimes went mad. We saw them gay and we saw them gassed, we saw them idle, and we found the dark stream of their fading lives on our stretchers, we passed them stealing up like ghosts to action and we left them lying in long brown rows, beside the old roads of Flanders."

One from the section in Alsace, tells this:

"A young lieutenant, *blessé*, whom he had brought in his ambulance, moaned and cried out as they came over the bumps, and in and out of the shell holes on the road. The driver reproached himself, but after the *blessé* had been made more comfortable in the poste de secours, he sent for the driver and, holding out his hand, said 'You drive carefully. I know, for I have a car. I don't like to cry—but I have two broken legs—anything hurts me

*The illustrations accompanying this article are reproduced from "Friends of France" by courtesy of Houghton Mifflin Company. The original drawings are by Charles Huard and Bernard Naudin.

—but it is realy decent for you fellows to come here—it is really *trop gentil'* . . . ! and the driver went back to his car marvelling for the first of many times at the sense of sympathy which had made that pain-stricken officer think of him at all."

Another *ambulancier* sends in to his section inspector some good letters written in laconics, and trying to show that he is keeping cheerful in the midst of weather that

would dishearten a Hudson Bay Indian and during an almost continuous bombardment he still keeps his sense of humor. "Jan. 9—Took Maud [the name of his car] out in the morning with Hill at the wheel. Went first to Moosch then back to test Hill. Maud pronounced fit for military burial after Hill's autopsy. . . .

"Jan 10. Shell No. 1 arrives—every one to *abri*—Cate and I stay outside. . . . Last shell sent window, door and stove in on us and blew us off the bench. Peeped into the next room. All blown to hell . . . a very low p. m."

There are some very touching letters to the folks at home, abroad, and grandma, from one *ambulancier* who has been given the *Medaille Militaire* for conspicuous bravery in carrying the wounded under shell-fire, and

the letters are written cheerily to keep up the courage of the folks at home, while the shell-hole in the writer's peritoneum is healing.

The book closes with a long list of citations from the French government and official letters of thanks to The American Ambulance for the service rendered to France. The American Field Service as a body has been released, but the work its members have done and the spirit which sent them has made an indelible impression. How France feels toward them can best be told in the words spoken over the body of Richard Hall, the *ambulancier* who made the great sacrifice and lies in French soil: "Les Français n'oublient pas."

Friends of France. The Field Service of the American Ambulance, Described by Its Members. Pp. 345, with Many Illustrations. Cloth, $2 net. Houghton Mifflin Company, Boston and New York.

CEREBROSPINAL MENINGITIS AT A TRAINING CAMP

Sanitary Measures Employed in Checking the Epidemic at the United States Naval Training Camp, San Diego

In July, 1917, an epidemic of cerebrospinal meningitis occurred at the United States Naval Training Camp, San Diego, Cal., among recruits received from the naval training station at San Francisco, writes A. Farenholt, medical inspector, U. S. Navy, in the *United States Naval Medical Bulletin*. Sixteen cases occurred, one of which terminated fatally. The patients were all treated at the municipal isolation hospital, an institution maintained by the board of health of the city of San Diego.

The complement of the station at the onset of the epidemic was approximately 1,600 men, who were quartered in large buildings originally erected to display exhibits during the Panama-California Exposition.

A study of the epidemiological conditions present at the camp during the first days of the epidemic revealed two factors which were of prime importance in the spread of the disease, namely, the presence of carriers of the meningococcus and some general insanitary conditions existing in the buildings used for quarters, which tended to lower the resistance of the recruits quartered in them.

Dr. Farenholt describes the means employed in eradicating the disease, considered in two groups, namely: (1) a bacteriological survey of the entire command for the purpose of isolating and treating the carriers of meningococci; (2) the general sanitary measures applied to the camp.

"The general sanitary measures applied to the camp were as follows:

"*Ventilation of the exposition buildings.*—These buildings are large structures, designed primarily for the shelter of exhibits of various character. Their ventilation depended on currents of air entering through doorways and small ornamental windows placed generally midway between the floor and the roof. The heated air from the lower regions of the building ascended to leave through rows of ventilators in the sides of skylights on the roof. These ventilators were partly closed by wooden slats designed to prevent the entrance of rain.

"With this arrangement of the openings for ventilation, large volumes of stagnant air collected in various portions of the buildings. To remedy this defect a series of ventilating holes 5 by 2 feet were cut in the walls of each building, two feet above the floor, and the wooden slats in every other ventilator in the roof were removed. With these alterations the ventilation of the buildings became satisfactory.

"*Exclusion of new infection from outside.*—A recommendation was made to the Bureau of Navigation that no recruits be sent to this camp from other training stations until it was reported that the camp was free from infection, the epidemic having subsided, and the carriers among the present complement having been determined and isolated. The bureau approved this recommendation and no new drafts were received.

"In the meantime a detention camp having a capacity of 480 men and capable of some expansion was constructed

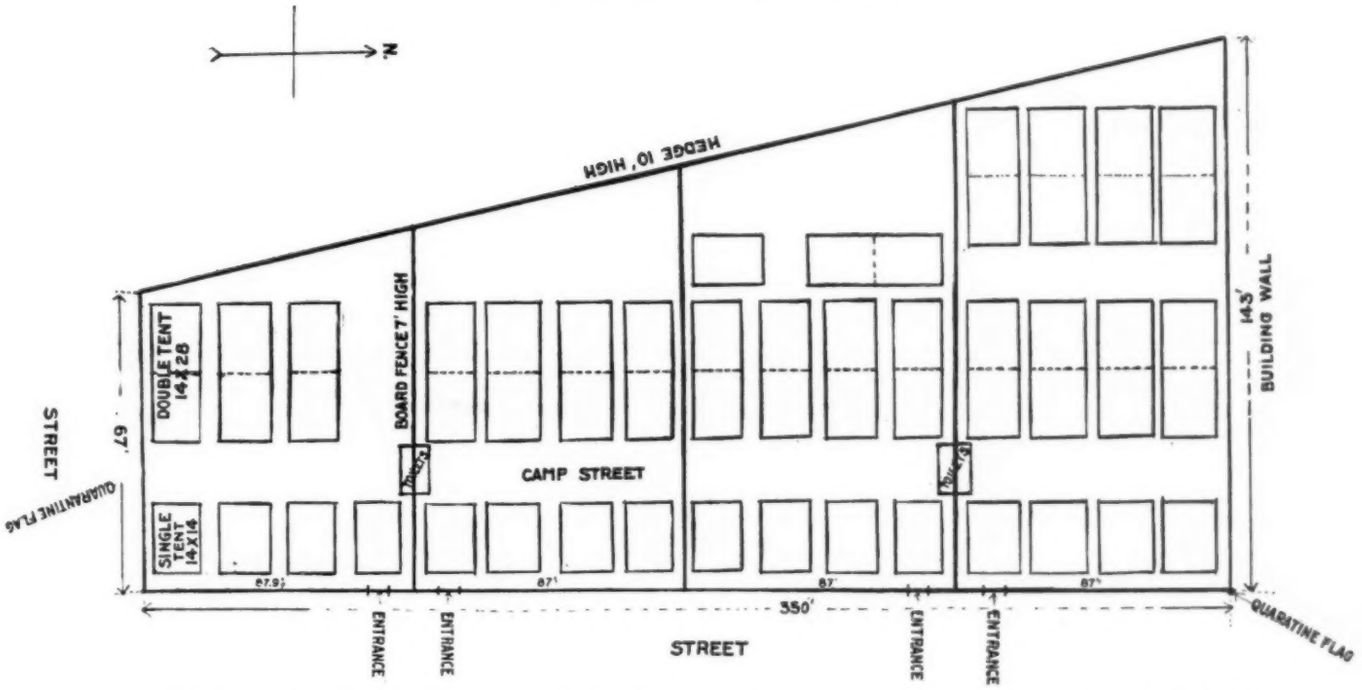


Fig. 1. Ground plan of isolation camp, showing division into four sections. Reproduced from the *United States Naval Medical Bulletin*, January, 1918.

for the reception of all newcomers. In this camp provision was made for the complete isolation of the inmates in groups of thirty.

"Prevention of the spread of the disease to the city of San Diego.—As soon as it was realized that the occurrence of meningitis in the camp was assuming epidemic proportions, liberty for all men under instruction was stopped.

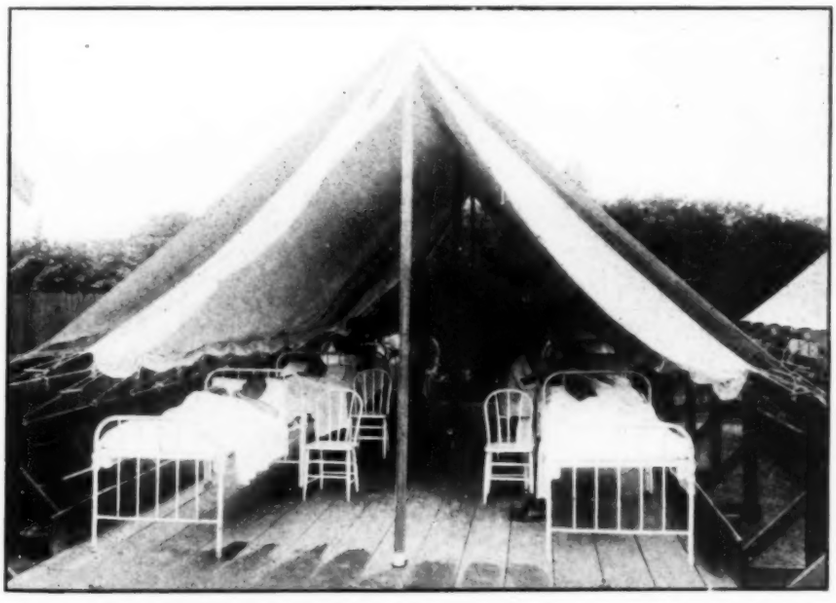


Fig. 2. View of tent used for bed cases at the isolation camp of the U. S. Naval Training Station, San Diego, Cal. There is one such for each paddock. Reproduced from the *United States Naval Medical Bulletin*, January, 1918.

With the exception of the chief petty officers and a few of the older petty officers living with their families in San Diego, no man was granted liberty until a culture taken from his postnasal space demonstrated him to be free from meningococci. Furthermore, *the camp was closed to all visitors from the city.*

"The evacuation of infected buildings.—The majority of cases came from one large building used as a detention barracks for men lately arrived on the station, and from a balcony in the Southern California Building used as a ward by the medical department. As the weather conditions in San Diego during the greater portion of the year are ideal for outdoor sleeping, the men quartered in the detention barracks were moved out on a large lawn, where they slept on cots in the open air. They were kept in detention until proven free from infection. The sick in the ward on the balcony were isolated in tents and were not returned to duty until a culture from the postnasal space negative for meningocicci demonstrated them from infection.

"Segregation of the personnel in small groups.—As far as was practicable the men attached to the camp were segregated into groups of 200 or 250. These groups did not mingle so far as it was possible to prevent it. Each group was quartered, drilled, bathed, and messed separately from the other groups. A talk was given to each group concerning the epidemic, and the men were cautioned against close contact.

"Disinfection by sunlight.—As the meningococcus has little resistance, advantage was taken of the abundance of sunlight prevalent in San Diego. Large frames were constructed, upon which the bedding was placed daily and allowed to remain flooded with sunlight until late afternoon. The mess tables, which at first were set up in a large building used during the fair as a restaurant, were moved out into a broad street, where they were exposed, with the mess gear face up, to the direct rays of the sun throughout the day. The men were kept out of doors as much as possible, with the result that the entire command soon assumed the tanned aspect of sailors who had cruised long on tropical seas.

"The ground available and used for this purpose [isolation camp] is a somewhat irregular rectangle, 350 feet in length, 67 feet in breadth at one end and 143 feet at the other. This space is divided into four sections by board fences eight feet high; a high wire fence surrounds the camp. Each section holds eight tents 14 by 14 feet, hospital size placed two to each platform on the lower row, and four tents 14 by 14 feet on the upper or street row.

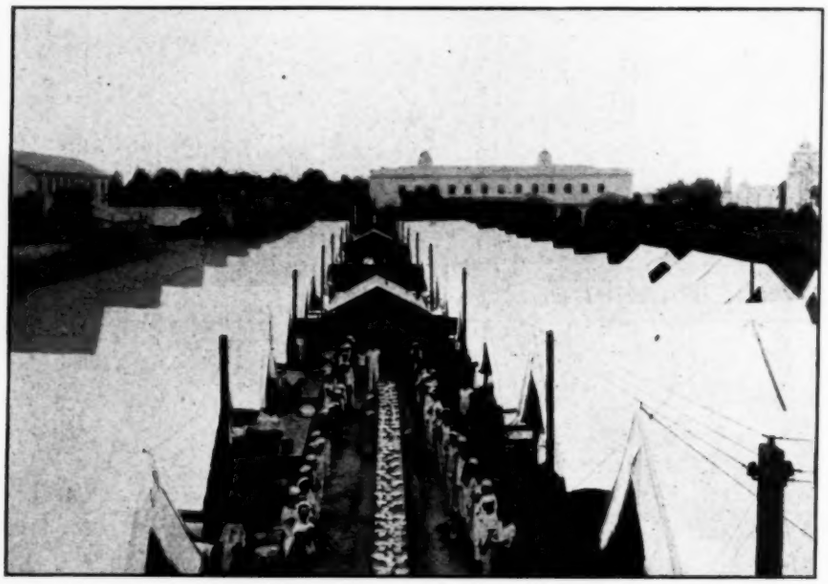


Fig. 3. View of camp street (see plan, Fig. 1). Reproduced from the *United States Naval Medical Bulletin*, January, 1918.

A street twelve feet wide runs between these two rows. One single tent is used as an entrance, Hospital Corps, and dispensary tent, and a space capable of holding a double platform in rear is kept open for clotheslines, etc.

"Between each two sections is placed a small house 9 by 10 feet completely divided in the center line, to which the fence comes. On each side of this is a toilet, washbowl, shower, and washboard.

"Owing to somewhat more space being available in sections 3 and 4, these are able to accommodate a larger number of tents (see plan attached).

Section 1 holds.....	54;	may be expanded to.....	88
Section 2 holds.....	66;	may be expanded to.....	88
Section 3 holds.....	84;	may be expanded to.....	112
Section 4 holds.....	114;	may be expanded to.....	152
	318		440

"The food is prepared in station galley and transported to camp, a distance of 150 yards, by three push carts. Messing is, at this season, done in the open street between tents.

"Ordinary cases sleep in camp cots, using their own bedding. More severe bed cases occupy regular hospital beds with mattress, pillows, and linen, of which a sufficient number is always held available."

The first unit of a Deaconess hospital being erected in Butte, Mont., is expected to be ready for patients in March. Miss Lydia Keller, of Northfield, Minn., a former secretary of the American Hospital Association, is to be superintendent of the new institution, which will open with accommodations for 40 patients.

The Army Nurse Corps

The following memoranda have been received from the Surgeon General of the Army:

"As it is believed that during the coming year, should the war continue, thousands of nurses will be needed in the Army Nurse Corps for service in the military hospitals at home and abroad, it is the desire of the surgeon general to direct the attention of the nurses of the country to this need so that they may make application for service and be available when the need has actually arisen.

"In 1909 the enrolled nurses of the American Red Cross were authorized to constitute the reserve of the Army Nurse Corps for service in time of war or other emergency. In order, however to meet the great and increasing demand for nurses, it has also been decided recently to permit those nurses who desire to enter the regular corps for the period of the war emergency only to do so, thereby waiving the usual period of appointment of three years. Application for appointment in the Army Nurse Corps should be made to the superintendent, Army Nurse Corps, Mills Building, Washington, D. C. and for enrollment with the American Red Cross to the director, Red Cross Nursing Service, Washington, D. C. The pay is $50 a month for the first period of three years, for service in the United States and $60 abroad. The enrolled nurses of the American Red Cross, when called into active service are subject to all the established rules and regulations for the government of the nurse corps and receive the pay and allowance of nurses on the regular list. These allowances include quarters, subsistence, and traveling expenses while traveling under orders. A leave of absence with pay for thirty days is allowed for each year of service which may accumulate for four years if the nurse desires.

"The equipment of nurses ordered abroad is furnished to all members of the Army or Navy Nurse Corps by the American Red Cross upon arrival at the mobilization station in New York prior to sailing.

"Passports are not required at this time for nurses in the uniform of the Army Nurse Corps, a certificate of identification being issued to each nurse by the War Department prior to sailing.

"Members of the Army Nurse Corps also come under the provision of the war and compensation act recently passed by Congress. In case of total disability a nurse is given $30 a month for the period of the disability, or in case of death her widowed mother would receive $20 a month for a period not exceeding 240 months. This allowance, however, may be augmented by the nurse in accordance with the amount of insurance she desires to take out. A nurse at the age of 30 would have to pay 69 cents per month for each thousand dollars worth of insurance, which amount, however, is slightly increased each year according to age. This would provide an income of $5.75 per month for each thousand dollars to herself in case of total disability, or to certain relatives who come within the permitted class of beneficiaries. Insurance is payable only to a husband, child, grandchild, parent, brother, or sister of the injured, or to herself. The insurance shall be payable in 240 monthly installments, except

that in a case of total permanent disability, monthly installments will be continued throughout the duration of the disability. This insurance may be carried for the period of the war and for five years thereafter, unless sooner converted. The insurance shall be term insurance for successive terms of one year each and must be in multiples of $500 and not less than $1,000 or more than $10,000. It is granted without medical examination and must be applied for within 120 days after admission to the service and before discharge or resignation from the service. Full information in regard to this question may be obtained by writing to the director, Bureau of War Risk Insurance, Division of Military and Naval Insurance, Treasury Department, Washington, D. C.

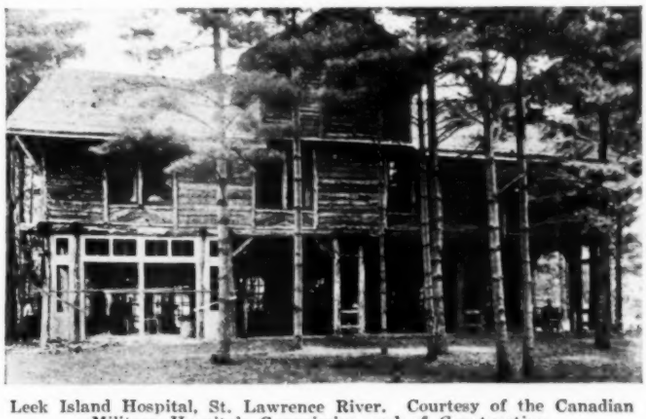
"Owing to the confusion which seems to have resulted from the publication of erroneous information in regard to the qualifications for nurses in the military establishment, the surgeon general desires to emphasize the fact that under the law only graduate nurses are eligible for service in the Army Nurse Corps. It is useless, therefore, for practical or domestic nurses to make application for this service as they cannot be accepted.

"Married women are not accepted for service at this time, though those who desire to make application may have their papers placed on file for future reference should need arise.

"Graduate nurses who desire to enter the service should make application to the superintendent, Army Nurse Corps, Washington, D. C., or to the director, Red Cross Nursing Service, Washington, D. C."

A Red Cross Hospital in the Thousand Islands

Sixty wounded Canadian soldiers are entertained in the beautiful summer home of an American woman, Mrs. Ira A. Kip, on Leek Island, in the St. Lawrence River. This is one of the Thousand Islands, and the delightful situation is indicated to some extent in the accompanying illustration. The house has been extensively remodeled



Leek Island Hospital, St. Lawrence River. Courtesy of the Canadian Military Hospitals Commission and of *Construction*.

and equipped as a hospital. An operating room with all conveniences has been installed. The plan is to remove the first patients, when the stage of their convalescence warrants the change, to tents and other buildings, thereby making room for others. The boathouse, of similar construction to the building shown, accommodates about twenty men.

When one door closes, another always opens, but we usually look so long, so intently, and so sorrowfully upon the closed door that we do not see the one that has opened. —Jean Paul Richter.

WAR TIME INSTITUTION ECONOMIES

WAR SAVINGS STAMPS

Encouragement of Thrift in Employee as a Duty of Hospitals—What War Savings Stamps Are

In order that their employees may conveniently buy them, many large business organizations carry a supply of war savings stamps and thrift stamps. This is in keeping with the purpose of the government to have them on sale in more places in the United States than any other single article. Hospitals should follow the lead of these business houses and encourage all employees to purchase war savings stamps, for by so doing they will be helping the government to get the thirty million "stockholders in the United States" which it is believed the issuing of these stamps will secure. By encouraging the purchase of war savings stamps we are also encouraging thrift, and, in urging thrift, hospitals will be doing something in their own interest, for the thrifty employee is the most efficient.

The story of the war savings stamps and certificates is simple and quickly told. The war savings certificate is a promise of the government. Its value is measured by the stamps that are attached to it. These stamps mature January 1, 1923. When you purchase one of these stamps it is attached to a certificate which is marked off in spaces for twenty stamps. The purchaser's name is written on the certificate, and when the first stamp is attached, his rights are as complete as they will be at any time, should he fill the certificate or add any number of stamps less than twenty. At the end of five years the government will pay $5 for every stamp. This amounts to 4 percent compound interest, compounded quarterly. Upon receipt of ten days' notice any postoffice will refund the money paid for the certificate, plus 1 percent a month increase, which amounts to 3 percent simple interest. These certificates may be registered without cost at any postoffice. Registering them insures the purchaser against loss, theft, or even the irretrievable destruction of the certificate.

Twenty-five cent thrift stamps are issued for those who cannot afford to buy a war savings certificate. The thrift stamp is attached to a card having sixteen spaces, which when filled will cost $4. A full card may be exchanged for a war savings stamp by paying 12 cents or 13 cents, or whatever the price may be at the time the exchange is made.

These war savings stamps are going to raise two billion dollars for the prosecution of the war. They are going to help the government in the gigantic task of equipping and maintaining the army of one million eight hundred thousand men we now have in training camps and in France; teach the lesson of thrift so sorely needed by the people of the United States; and above all—their most important function—bring home to every man and woman, boy and girl, a realization of their personal obli-

gations to their country in war time. They are going to help win this war.

We doubt that the man lives who knows what this new unit, which the government is dealing with, the billion dollar unit, really is. Some hospital executives know what a million dollars is, because they know what kind of an institution a million dollars represents. But a billion dollars staggers the imagination. A Washington mathematician has figured that if at every minute since the birth of Christ a dollar had been set aside we would on the 29th day of April at twenty minutes before noon have completed one billion dollars. And think of it! Congress has appropriated nineteen billion dollars since we declared war on Germany. It amounts to three times all the money there is in the United States.

Every dollar hoarded, every dollar spent uselessly or upon luxuries we can do without, and every dollar spent which employs labor needed by the government or helps to occupy factory space which could be used for the manufacture of munitions or army supplies, is a slacker dollar. Our government needs our help. We are part of the government, and should lend it our dollars to give it the credit and things needed to carry the war through to a successful termination.

The number of doctors and nurses formerly connected with hospitals, now in service in the army and navy, is eminent testimony of the patriotism of hospital people and a guarantee of their interest and cooperation in any patriotic enterprise.

Remember the war savings stamps and keep them moving.

* * * *

War-Time Economies at Flower Hospital

BY OLIVER H. BARTINE, Superintendent, Flower Hospital, New York.

The increased operating expenses of Flower Hospital for the fiscal year ending September 30, 1917, amounted to $33,952.62; the revenue increase amounted to $38,560.61. In other words, the revenue increased more than the expenditures to the extent of $4,607.99.

	1916	1917
Revenue	$126,742.10	$165,302.71
Expenditure	145,384.70	179,337.32
Deficit	$ 18,642.60	$ 14,034.61

The capital account, however, does not make such a favorable showing.

The following are some of the suggestions and measures that we have adopted:

WAR TIME SERVICE
HELP YOUR COUNTRY, HELP US,
THEREBY HELPING YOURSELF.

Careful observation of the garbage pails, with all that it implies, has been instituted.

The usual comparison of quantities of drugs, surgical supplies, food, fuel, and all other supplies, as well as the census as compared with recent months, and the same months of recent years, has been made, then reduction where found to be feasible and possible.

We have tried to serve smaller portions of food. Why serve large quantities of food when the service of smaller portions would be more satisfactory from every standpoint? Having in mind other items both large and small, I would like to know what becomes of the large portion of butter that is served each person, and the two, three, four, and five heaping teaspoonfuls of sugar that are dropped into the ordinary cup of coffee and a large portion of which is still in the cup after drinking the coffee. If a commercial enterprise used such extravagance it would spell bankruptcy. A competent nurse will study and know her patients' needs and tastes and will therefore not fill the plates or dishes with food that will simply be set aside. For instance, why serve to the particular patient a large supply of meat, potatoes, tea, bread, etc., with the previous knowledge that certain food is not eaten? This will also apply to the waitresses in the various dining rooms. If a patient or employee is desirous of a large portion of a particular food they will not hesitate to ask for it. It is very laudable to anticipate their needs and wishes in the right direction but to be wasteful at the present time is criminal and unpardonable.

The use of minimum quantities of supplies in continuous dressings of surgical cases is insisted on; also the re-use of many surgical dressings; for instance, rubber tissue, gauze, bandages, etc. Why use paper bags for soiled surgical dressings while a newspaper can be made into a receptacle for that purpose? Dressings are all prepared in minimum sizes, supplying a minimum quantity of supplies to each department. Many surgical appliances and instruments cannot be procured and many can be purchased only at prohibitive prices. Great care should be exercised that none go astray, also great care should be taken over their physical protection. Private patients should be induced to adhere to the regular menus as far as possible. Inexpensive, appetizing diets are supplied in place of more extravagant ones; also meatless, porkless, and wheatless days, etc., are observed. All special diets are supervised by the attending doctor. It is made as difficult as possible for employees to carry supplies away from the hospital, especially those who live at home. Substitution for economy is practiced in the use of drugs, surgical and other supplies also distribution in minimum quantities. Many stock drugs are now procured from the pharmacy in smaller quantities than heretofore and more strict supervision over its distribution is observed by the nurses in charge of the various departments. The locking of medical and supply closets, as well as refrigerators, etc., on the wards, private floors, and operating rooms, etc., is strictly adhered to, and the key is kept in charge of the head nurse, whose duty it is to dispense the supplies and see that the unused portions or appliances are returned. The order for many drugs is to be signed by the attending doctor.

Nurses are requested to observe that all utensils and other service articles are returned to their proper place of storage after using. This will simplify the work and anxiety of the head nurse or the head of the department in keeping control of the stock of working supplies or equipment. A distinct leaning toward extravagance is the slipshod method frequently seen in institutions among porters and cleaners. This could be rectified by a proper supervision of their work and supplies. Conservation of soap is most essential. Cleaners are requested not to use large quantities or to permit used soap to remain unnecessarily in the water. Nurses are asked to assist us in relieving the laundry by decreasing the number of pieces of linen sent to the laundry from each department, including personal linen. Soiled linen should be thoroughly soaked and temporarily washed before sending it to the laundry. Provision should be made to wash and sterilize all used gauze, muslin, etc.

At the same time we attempt to make our private patients' service attractive to both patent and visiting doctors, thereby enabling us to keep the rooms full at all times, including the summer months. Comparisons are being made of the quality of the work and operating costs

of each department, including wards and private floors. Department heads are asked to keep their departments up to a high state of efficiency. Every person connected with this institution is made to understand distinctly that the present unusual war conditions cause many rapid changes and it is essential to keep up with the times. Those not keeping up with the progress of the day will not be considered essential to the welfare of the hospital or to any other hospital or establishment to which they may apply for preferment. By assisting us in meeting our new requirements, employees are helping themselves. This thought is commended to their consideration.

The establishment of cafeteria service for the dining rooms will unquestionably go far toward solving the waste in the food problem as well as its inefficient and extravagant service. Observing that the maximum amount of revenue is collected from our various departments, commensurate with the service given, at the same time not overlooking the fact that we are a charitable institution, and our object the care of the ill and afflicted. A competent steward is most important; the employment of such a man should not be passed upon lightly. An employee has been given the duty of observing the economical use of food and other supplies.

Construction, boiler room, and maintenance of buildings, economies, etc., should be given the most careful consideration.

All are admonished to remember the gospel of the clean plate. From time to time new conditions will arise and a shortage of many commodities is likely to exist. We should do our utmost in meeting the exigencies as they arise.

* * * *

U. S. Food Administration Recommends Harvesting Ice to Save Ammonia

One of the best opportunities of conserving ammonia is made available by the substitution of natural ice for the manufactured product. This substitution is being provided for throughout the country, and it is expected that a very large percentage of the ice used next summer will be ice that the Food Administration is encouraging people to harvest now from rivers and ponds wherever possible.

A serious obstruction in the way of this splendid opportunity of providing an urgently needed chemical for our army and navy is caused by the fact that several large cities have restrictions against the use of natural ice.

It is obvious that municipalities should not permit the use of polluted ice. There is much misapprehension and prejudice concerning the use of natural ice that careful consideration and study will dispel. To any boards of health, etc., interested in this subject the Food Administration will be glad to send any of the following booklets, published by Natural Ice Association of America, 18 East Forty-first street, New York city:

Status of Scientific Opinion of the Purity of Natural Ice.
The Effect of Handling and Storage on the Safety and Purity of Ice.
Non-Relation of Natural Ice to Typhoid Fever and Dysentery.
The Purity of Natural Ice.
The Bacteriology of Ice.
The Sanitary-Chemical and Bacteriological Examination of Natural Ice.
Melted Natural Ice Compared with Bottled Spring Water for Drinking.
The Study of the Purity of Natural Ice from Polluted Water.
Melted Natural Ice vs. Bottled Spring or Distilled Water for Drinking.
Bacteria in Natural Ice.
Natural Ice and the Public Health.
Factors of Sanitary Safety in a Natural Ice Supply.
Water from Melted Natural Ice for Domestic Use.

DISPENSARY AND OUT-PATIENT WORK

Conducted by MICHAEL M. DAVIS, Jr.,
Director of the Boston Dispensary.

Please address items of news and inquiries regarding Dispensary and Out-Patient Work to the editor of this department, 25 Bennett street, Boston, Mass.

The Problems and Place of the Dispensary and Out-Patient Department in War-Time*

REPORT OF THE COMMITTEE ON DISPENSARY WORK AMERICAN HOSPITAL ASSOCIATION

This year is different from all other years within our memory. Amid the innumerable effects of the world war, it is laying its heavy hand upon medical service. The 2,500 dispensaries and out-patient departments in the United States are treating between 3,000,000 and 4,000,000 persons a year. The war faces them with new difficulties and new opportunities. It has been our part to make some slight study of these.

High prices, particularly of food, are pinching the poor. These are partly counterbalanced by more continuous employment, and in some industries by higher wages; but, as the statistics of the Federal government have shown, the rise in prices has on the average outrun the rise in income. Families which a few years ago had as a rule a small margin over necessities, so that they could pay for a little doctoring in cases of acute or serious illnesses, now no longer have that margin. Those families of a higher level, well above the poverty line, but without any substantial savings or property, find it much more difficult to meet the expense of any prolonged or unusual illness, or to provide for specialists' services—the oculist, laryngologist, dentist, orthopedist, surgeon. At the same time, a dire shortage in the medical profession is appearing. If the most recent published estimates are correct, one-fifth of the total number of registered physicians in the United States, or nearly 30 percent of the 90,000 physicians of the active military ages, will be taken into the government service and out of private practice. A certain proportion of the population will be taken with them, it is true, but there will remain the old people, the women of child-bearing age, and the children—the groups among whom sickness is most frequent. These groups must be cared for with a diminished power to meet the expenses of medical treatment and a diminished number of physicians to provide the treatment needed.

We have received from a number of superintendents interesting suggestions for the work of the dispensaries during the war. "What is your dispensary doing, or planning to do, to meet war needs?" We shall quote two answers to this question, out of many received. The first one is from the superintendent of a hospital in a community of 100,000 persons:

"In answer to your question, I would say that we expect

*Read before the American Hospital Association at its nineteenth annual session, Cleveland, O., September 12-14, 1917. This committee consists of the following members: Michael M. Davis, Jr., Boston Dispensary, chairman; John E. Ransom, Rush Medical College Dispensary, Chicago; Ralph B. Seem, Johns Hopkins Hospital, Baltimore.

to organize our dispensary work along much broader lines: (*a*) for charity patients; (*b*) for paying patients.

"Members of our staff are awakened to the new conditions, and those who are not available for war service or cannot pass the examinations are in some instances preparing themselves for specialized work—a thing which we have had very little of in this city up to the present time. Each physician has been a general practitioner.

"To summarize: the war is affecting us and our dispensary work, first, by showing an increased need; second, by causing a shortage of medical men; third, by making the necessary special efforts to secure funds; fourth, by impressing upon the medical men themselves the need of greater cooperation and the division of labor."

The second answer to the same question which we shall quote comes from the superintendent of a well-known hospital in one of the largest cities of this country.

"There certainly will be need, at least in certain districts, for organized efforts to care for the medical needs of the people. If such a need should develop in this city, I should consider the enlargement of pay clinics to meet this need. It is not likely, during the war, that the people will be unable to pay the small fee required by pay clinics. In this way, physicians could care for the maximum number with the least effort; and because organized as a pay clinic, the finances would not be difficult.

"We know that the organization of pay clinics in regular dispensaries is a very simple matter. The organization of pay clinics in hospitals is a simple matter also. Many small hospitals run practically this now, especially for industrial disease cases.

"A comparatively easy way to extend medical service to the public is at hand. This way is the extension of the pay clinic idea. This would operate as an extension, by making the work of each medical man more efficient by organization and concentration of the work. There would remain available in the country many men unfit for military service who would naturally drift into the pay clinic and the necessary home visits, both being remunerative. The financial condition of the working people during the war makes the operation of pay clinics needed, and the opposition thereto from physicians will disappear. This organization will extend greatly the efficiency of medical service quite sufficiently to meet any needs which may develop."

The committee has recently communicated with a number of representative dispensaries and out-patient departments in about twenty of the larger cities of the United States. The majority believe that there will be substantial increase in the need for dispensary service in their community. Some have already observed an increase, which they attribute to the war and the conditions caused thereby. A few are doubtful as to the future, and only three believe that there will be no increase of need. Unanimous testimony comes as to the shortage in medical staff already begun or definitely anticipated. The large institutions report that the proportion of dispensary staff which has gone, or is expected to be taken, is usually over 12.5 percent, and in some instances is higher than 25 percent. If the war continues long, the loss may be much more serious.

Shortage of medical men in the hospitals and dispensaries and in the communities outside is only just beginning. The next twelve months will, in all probability, face us with real war conditions. By the time the association meets next year, we shall know many of these conditions and not merely anticipate them. We shall feel the burden less if we do anticipate them today and plan to meet them.

The primary duty of the dispensary and out-patient department is to give medical care in general and special lines to the masses of the population, not merely to the destitute. This responsibility will not be diminished, but will be greater during war-time. Especial effort must be made to maintain and, in some respects, to increase dispensary and out-patient service during this period. It is encouraging to note that not a single one of the hospital or dispensary superintendents who replied to our letters thought that there would be any substantial diminution of the funds available for their out-patient departments. This is one of the questions which we had asked.

How shall the shortage of medical staff be met? Older men, not subject to draft, must be sought; existing staffs must do more work. Several dispensaries have indicated that they are making a special effort to secure women physicians in some departments to take the place of men who are called away. Many hospitals are asking men who have served as interns and who have located in practice near the institution to come back and give service in the out-patient department. But these efforts will take us only a little way. More far-reaching means must be adopted.

Even in those cities where dispensaries have farthest developed, as in New York, Chicago, Boston, and Philadelphia, only a comparatively small proportion of the medical profession are on the staff of dispensaries and out-patient departments, and have the clinical advantages afforded by such connection. In New York and Boston, for example, only between 25 percent and 40 percent of the whole profession are on dispensary staffs. It is much to be desired that members of the medical profession who are in general practice and who are largely cut off from the diagnostic equipment and the opportunity for joint study of cases which the well-organized dispensary affords, should have such advantages. The war now gives an opportunity, unique in a generation, for the medical institutions, and particularly for the dispensaries, to come into more extensive and democratic relations with the rank and file of the profession. We must recognize the fact that in every community there are a certain number of physicians who have graduated from unsatisfactory medical schools or whose training in other respects has not been adequate. But these are a small minority. There are a large number of general practitioners who would give good service, who would themselves benefit, and whose patients would benefit, by association with a well-organized dispensary clinic. To democratize the facilities of the dispensary through some form of acting appointment during the war for physicians of this type will be a gain all around.

The dispensary or out-patient department, in other words, needs to call into its service many practitioners who have ordinarily no institutional connection. Let the invitation be issued, and the response will be favorable; for the spirit of service, ordinarily strong in the medical profession, is emphasized during this period of national need. In some instances a form letter of invitation should be sent to a list of local physicians individually; under other local conditions it may be better to issue the call through the local medical society. Each invitation should give the doctor opportunity to indicate the specialties in which he would prefer to work; but particular effort should be made to get men for the general medical, pediatric, and surgical clinics, where the shortage of doctors is likely to be most felt.

The dispensary will then have to organize and utilize the new men in the right way. If each clinical department retains a nucleus of the regular men, and preferably its chief, the problem of organizing the new men will be simple.

One great point of the present situation is that the shortage of physicians, if it becomes as serious as we anticipate, will remove much of the objection to dispensaries that has appeared in some cities. Instead of opposing the out-patient clinics, many practitioners will be willing to take part in their work as a means of giving medical care to the many to whom they would otherwise have to give it anyway, at a greater expenditure of time.

If we are to realize the benefits of dispensary work, meeting the unusual need for medical care of the population during war period and supplementing the shortage of medical staff in the community, it is essential that the standards of dispensary work be upheld. We must not return to the habits of former years—the hasty examinations, the indiscriminate giving of prescriptions as a means of sending the patient away with a feeling that something has been done for him. Standards of dispensary service have been rising; they must continue to rise, because during the war-time dispensaries must play a more serious part than merely giving charity to the sick poor or opportunity for instruction to medical students. Dispensaries must play a much larger part in caring for the health of the general population, irrespective of financial condition or relationship to medical education.

THE TEACHING DISPENSARY

The problems of the teaching dispensary are of particular importance. Besides the adequate care of the sick it has an added responsibility in the instruction of medical students and the advancement of medical knowledge. It is the main source of material for the investigation of many chronic diseases before organic changes have taken place, and also affords opportunities for study of minor ailments. It should be the center of the dissemination of knowledge for the prevention of disease, of prophylaxsis, and of the manner of living.

In planning to meet conditions every effort should be made to maintain the accepted standards of dispensary work and guard against any hurtful interference. The work will have to be done by a smaller number of men. Those who remain at home must carry burdens up to the limit of their strength. Therefore, we must consider a plan of organization which will provide for the conservation of the time and energies of the staff and supplement their work by others. In so far as it is possible to do so, the members of the staff should be relieved of administrative duties and routine work. Members of the house staff should actively participate in dispensary work. One of the senior house men whose duties in the hospital are of such a nature that he will be familiar at all times with the number of patients on the wards and the medical problems which they present should be in the clinic each day and have charge of all administrative details. All patients recommended for admission into the hospital should be handled by him.

Every effort should be made to have a well-trained physician in charge of the clinical laboratory in connection with the dispensary. There is possibly not any one factor which will mean more to the staff and to the service rendered to patients than a well-equipped laboratory with a competent physician in charge who will direct the students in their examination of specimens and do the work himself when called upon to do so.

In many teaching dispensaries it is customary for students to work in the general clinics of the dispensary during their third year, when they require the maximum amount of supervision. By rearrangement of teaching schedules so that the students will be in the general clinics during their fourth year, at the same time that they are having their ward work, they can be of great assistance in carrying on the work of the dispensary. They will also have the opportunity to follow in the wards patients admitted from the dispensary, and likewise to follow in the dispensary patients discharged from the wards, who return to the dispensary for observation and treatment.

The services of clerks or stenographers in large clinics would be of assistance to the doctors. In addition to taking special notes and doing the clerical work of the department they can look after details of clinical management. The installation of telephones in the clinics so that physicians can keep in close touch with their offices, and interns with the patients in their wards, is a time-saver and a great convenience to the staff.

In almost every community there are a considerable number of intelligent young women who are eager to volunteer their services to hospitals and dispensaries in any capacity in which they can be of greatest usefulness. When these volunteers are properly trained they can be of great assistance in carrying on the work of the dispensary. The following suggestions are some of the ways in which they can be useful: to assume responsibility for histories and patients until they arrive in the hands of the doctors; to distribute and collect histories; to separate different classes of patients who are being treated in the same department—as the old from the new patients—and get together those who receive the same kind of treatment—as cases for massage, baking, etc.; to see that patients understand what to do and where to go when they are to have an x-ray picture taken or a Wassermann test made; to take patients to other departments for consultation and to escort those who are recommended for admission to the admitting office of the hospital; to operate the follow-up system and to send cards to patients, or in some instances to visit them in their homes when they do not return for treatment and when the doctors feel that it is important for the patients' welfare that they do so. Some of them can be used to explain to patients the doctor's orders, and assist in holding classes of instruction for groups of patients, as the tuberculous, the cardiacs, the nephritics, the diabetics, etc. These volunteers should be trained and work under the direction of the social service department.

CHARITABLE SOCIETIES AND THE DISPENSARY

Charitable societies are facing unusual problems during the war. The charity organization societies of all our large cities have many families in which illness or incapacity is the chief causative factor in their dependency. The rehabilitation of these families must depend in large part upon the restoration to health of the incapacitated member. Before a plan can be made for such families, the charity organization society must know the physical condition of the individual in question and the prognosis of his case. This is a service which a good dispensary or out-patient department can and should render. We are all called upon for such service frequently. Those who ask for it often complain that we do not render it efficiently or cheerfully or promptly. The dispensary can render its best assistance to the Red Cross by assuming responsibility for the medical care of persons referred to it by the civilian relief committee.

Last year a questionnaire was sent out to charity organization societies of all the cities in the United States of 50,000 or more population, asking particularly concerning the efficiency of the dispensaries and out-patient departments from the point of view of these societies. The answers naturally set forth both good and bad qualities of these institutions. The chief complaints were that many of the out-patient departments did not follow up patients who should be kept under treatment, leaving the responsibility for the continuance of treatment with the patient or with some outside agency who might be interested in him. This, of course, means a certain degree of inefficiency. Others complained, as mentioned above, that they had

great difficulty in securing adequate information concerning patients in whom they are interested. Practically all of these organizations felt that the establishment of efficient social service departments has greatly facilitated cooperation and has increased the efficiency of the out-patient departments generally.

Requests for suggestions as to how dispensaries might become more efficient brought out points that may be very helpful. Here are some of them:

"That workers from medical institutions and those from relief agencies meet at certain definite periods to discuss and talk over plans for those cases in which both are interested."

"We would like to see the dispensaries work out some plan for following up medical treatment in the home. If a patient who has been receiving dispensary treatment becomes too ill to attend the dispensary and is not ill enough to go to a hospital, we are obliged to send the county doctor into the home. He has not had the benefit of the record at the dispensary and has no previous experience with the patient, so that his treatment must necessarily be carried on independently of the medical history and plan for the patient made by the dispensary physician. Much suffering could undoubtedly be alleviated if dispensary doctors would work out some plan for continuing treatment in the home under their supervision."

"General night clinics for workingmen and women. In seeking cheap treatment they are often forced to go to quacks or neighborhood doctors, who are often unskilled and sometimes unscrupulous."

"Interpreters for foreign-speaking patients."

"Patients are frequently not given instructions which they understand about taking medicine. This is, of course, due in many instances to lack of interpreters and in others to the fact that the dispensaries are overcrowded and the doctors consequently in a hurry."

"That in cities where there are a large enough number of them, the medical workers and dispensary officials organize into a group that may be helpful in standardizing medical service for the poor and promoting a fuller realization of its social significance."

Dispensaries can greatly increase their service to their communities through cooperation with other philanthropic and social agencies. Relief organizations, corrective agencies, and out-patient institutions are often working on different phases of the same problem. Each can be more efficient if it knows what the others are doing. Working in harmony, they may solve the problem; working otherwise, they may only complicate it.

To make this possible, every dispensary must have two things:

1. A definite policy of cooperating with outside charitable societies.

2. A well-organized social service department as an essential in making such a policy effective.

WORK OF THE COMMITTEE

This committee has considered carefully the work which should be undertaken during the coming year. Certain problems are of especial medical importance at this time within the dispensary field.

1. The Handicapped: The war will doubtless send back thousands of men who are more or less disabled, but who by medical care or special training can be fitted to support themselves either in whole or in part. A national commission is studying this problem. But when it comes to working out the details of the medical care required for the handicapped in each community, local provision must be made, and the dispensary, through special clinics, must come into this scheme. A study of this from the standpoint of the American Hospital Association, with the aim of planning how out-patient departments in each community can assist in the care of the handicapped, might be quite timely.

2. The examination of soldiers or prospective soldiers has made it familiar to all how great is the need of *dental care*. This has been well known to the experts, but is now popular knowledge. The demand for dental services among the population as a whole will be increased, and dental services will be more intelligently used than formerly. There should be a special study of the standards and methods of dental clinics and of means of providing them in connection with existing hospitals and out-patient departments, rather than through new buildings.

Among many suggestions for future work which have come to the committee from superintendents of various hospitals, the three previously mentioned—pay clinics, care of the handicapped, and dental clinics—have been referred to most often. The subject of dispensary abuse comes up this year, as always, though there is some reason to believe that this agitation will be diminished by the war. In so far as this subject raises real present issues it should be dealt with by this committee of the association in the ensuing year.

3. In recent years dispensaries have developed rapidly not only in large cities, but also in cities of moderate size, and of late have been frequently established in connection with industrial plants. The needs for dispensary work of communities of different sizes, and the kinds of dispensaries that ought to be maintained require special study. One superintendent suggests that this committee undertake next year the following:

"Make a study of the needs of various grades of cities, of those of 25,000, 50,000, 100,000 inhabitants, etc., of an industrial community compared with a university community, and many other classifications. The committee may aid in outlining a definite organization for each class. Show by printed reports the possibility not only of free dispensaries, but also of the pay clinic, and be ready to assist in the organization of either."

From letters and inquiries which have come to us, the committee is led to believe that there is unusual interest in dispensary work at this time, and that there is a demand that the standards and the special information which have been worked out in previous years by the committee on out-patient work of this association, and by other bodies concerned with dispensaries should be placed more widely in the hands of superintendents and other officials of hospitals and out-patient departments. We believe this demand to be fairly widespread. In our opinion much can be accomplished to improve dispensary work by more general dissemination of concrete information as to standards and methods of out-patient work in general, and in particular with reference to the needs and possibilities during war-time. The committee believes that, during the coming year, opportunity should be afforded for this committee to circulate among the dispensaries of the country the information now at hand and collect and distribute new information of especial timeliness.

Under the by-laws of the association the committee on out-patient work is empowered to take such action, but some funds will be necessary. In continuing the committee under the by-laws for the coming year, a larger appropriation should be provided. The sum of $500 is needed for the work, about $200 of which would cover the expenses of meetings; the remainder would be required for clerical work, printing, and postage. The committee realizes that the finances of the association may not permit of such a fund being appropriated and is therefore asking that $200 be appropriated by the association. The remaining sum must be raised in some other way.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army.

The Henrietta Bird Memorial Hospital, in Paoning. China Med. Jour., Shanghai, 1917, XXXI, No. 5.

The rapid progress of Western medicine in China is to a great measure due to the numerous small mission hospitals which have been established throughout the country. The Henrietta Bird Hospital was opened in 1907 on a very modest scale, but its work soon overcame the prejudices of the people and gained their appreciation and good will. It has steadily grown during the last few years, and the patronage has increased so much that a number of new buildings could be added. It is the aim of the hospital administration that all helpers, attendants and servants shall be Christians whose lives will commend the work of the mission.

Heliotherapy. M. Maurizi. Medicina nuova, Roma, 1917, VIII, No. 25.

After giving a brief historical review of the development of heliatherapy, the author states that Italy, with its mild climate, its sunny hillsides, its sea-bathed shores, and its ever-serene sky, is the ideal country for heliotherapy. Yet this efficient method of cure has not been made use of as it deserves. Few stations of heliotherapy have so far been established, and few hospitals are provided with the means of carrying it out. The new municipal hospital of the city of Ancona, built on the pavilion plan, has not overlooked this important method of cure. It has erected alongside of each pavilion a solarium where the patients who are in need of it can avail themselves of the curative properties of the sun's rays.

Organization of Military Hospitals for Venereal Patients. Pautrier. Ann. de dermat. et de syph., Paris, 1917, VI, No. 5.

Experience has shown that the treatment of venereal diseases in general military hospitals is very inefficient. Frequently, the physicians have not the necessary special knowledge or are not provided with the means for carrying out certain treatments. As patients are often transferred from one hospital to the other, a systematic treatment is almost impossible. The establishment of special hospitals for venereal diseases is therefore a necessity. These hospitals should be located in the chief city of each military region, where the hospitals for the other specialties are established. The services for nervous diseases, of ophthalmology, ortorhinolaryngology, etc., have important relations to syphilitic infection, and it is therefore necessary that all special services be grouped close together in order to assist each other in the diagnosis and treatment of disease. Such a hospital should also conduct a consultation service where all soldiers of the locality and all laborers working in military establishment may obtain advice and treatment. A venereal hospital has three functions: its work is at once diagnostic, therapeutic, and prophylactic. For diagnosis, men thoroughly versed in the use of the ultramicroscope and in applying the Wassermann reaction are necessary. In the treatment, the remedies which restore the patient in the shortest possible time, namely, neosalvarsan, novarsenobenzol, or galyl, should be used. The prophylactic work consists in giving the patients hygienic advice and carrying on an educational campaign among the troops by means of lectures.

Care of Patients with Nervous and Mental Diseases in Amsterdam. W. Vos. Ziekenhuis, Amsterdam, 1917, VIII, No. 10.

Though during the last ten years several new institutions for nervous and mental diseases have been established in the Netherlands, the present hospital capacity is not sufficient for the care of all patients. This is due not only to the growth of population, but also to the increase of nervous and mental diseases. From 2.75 per thousand inhabitants in 1909, the nervous and mental patients have increased to 3.32 per thousand in 1917. For these reasons a commission appointed by the city government of Amsterdam to examine this question recommends the establishment of a new hospital for the insane in conjunction with the Province of North Holland. The commission also recommends the erection of a municipal sanatorium for nervous diseases.

Means of Combating Tuberculosis. Riv. di ig. e san. pubb., Torino, 1917, XXVIII, No. 18.

Dispensaries are one of the chief means and the mainstay in the modern struggle with tuberculosis, around which all the other institutions of assistance and prevention are grouped. While they are a means of curing tuberculosis, they are also eminently preventive and educative institutions, extending their work to the families of the patients, giving hygienic advice, recommending prophylactic measures, and educating and elevating the hygienic conscience of the people. While in large cities the dispensaries act as diagnostic agents, such diagnostic centers should also be established in smaller places where the work could be performed by hospitals or by bacteriological laboratories. Greater attention should be paid to the institutions established for the prevention of tuberculosis among children. The number of seaside hospitals for children, a preeminently Italian institution, should be increased. The same holds good as to mountain sanitoriums, country colonies, open-air schools, etc.

The Orientation of Hospital Buildings. E. Bertarlli. Riv. di ig. e di san. pubb., Parma, 1917, XXVIII, No. 16.

The writers on hospital construction differ very much on the question in what direction the main front of a hospital should face. Some authors maintain that the main front should extend from north to south, others from west to east, while many prefer an intermediate direction. Ronzani, who says that most Belgian hospitals are facing south, believes that in such hospitals the rooms are cooler in summer than in winter on account of the greater inclination of the sun's rays, while in an east-and-west exposure the winter sun penetrates the rooms only during a short space of time, and then only during the hours in which the sun's rays in their course through the atmosphere have lost a large portion of their caloric power. In England almost all hospitals face south, like

the King's Hospital in London, the Royal Infirmary in Manchester, the City Hospital of Liverpool, and the Hill Hospital in Glasgow. In Germany a few hospitals, like the New City Hospital in Carlsruhe, face east, and some others, like the St. George's Hospital in Hamburg, southeast. The author concludes that no fixed rule can be established in this question, for in each individual case, the prevailing direction of the winds, the local thermic conditions, reasons of convenience, etc., must be taken into consideration.

Heliotherapy in Military Hospitals. E. Vidal. Caducée, Paris, 1917-18, X, No. 2.

Heliotherapy combined with the Dakin-Carrel treatment marks a great advancement in the treatment of wounds. Heliotheraphy is no haphazard treatment. Certain rules must be followed to be successful. The sun rays must strike the wound directly without the interposition of any kind of glass. The treatment must be progressive with regular intervals of rest. On the first day the wound is exposed for five minutes; on the second day, twice for five minutes with an interval of five minutes' rest between. Thus a daily insolation of three or four hours is gradually reached, with fractional exposures of five minutes separated by five-minute intervals of rest in the shade. The results of this method are prodigious. In a few minutes, under the eyes of the attendants, the wounds undergo a change. They first become red, secrete an abundant clear liquid, then become dry and glazed. The slightest touch causes abundant bleeding. The bony surfaces become black as if carbonized. In a few weeks, wounds are healed up which, by the usual methods, would require many months of treatment.

A Mobile Surgical Hospital. Doisy and Marcille. Bull. de l'Acad. de méd., Paris, 1917, LXXVIII, No. 35.

All wounded who cannot be transported must be operated on at the front. But surgical formations must be mobile so as to serve in mobile as well as in stationary war. A mobile surgical hospital consists of an operative and technical and a hospital section. All the apparatus of the former, a laboratory for sterilization, a heater for the operating room, an x-ray machine, instruments, etc., are carried on four two-wheeled or four-wheeled carriages which are pulled by automobiles. The hospital section is divided into two groups. Each group consists of three or four rigid folding tents, each containing about fifty beds. These tents have double walls and are composed of segments which fold like the partitions of a pocketbook. A tent with fifty beds weighs 2,500 kg., while the old wooden barracks weighed 30,000 kg. Such a tent can be transported on one carriage, while the old barrack required three carriages. A rigid tent can be mounted in two hours while the mounting of a wooden barrack requires several days. The beds are stretcher-beds, 0.75 meter wide. When the patients are carried from one tent into another these beds are transformed into stretchers of the width of 0.55 meter. The patients are thus transported without leaving their bed.

What Can Be Done for the Improvement of the Care of the Sick in the County Districts. A Socio-Economic Study. J. L. Wortman. Ziekenhuis, Amsterdam, 1917, VIII, No. 9.

The economic side of sickness is not fully appreciated in the Netherlands because the care of the sick is not fully regulated by law. Where sickness insurance exists, the economic loss to society from sickness can be shown in exact figures. To form an idea of this loss we may take the statistical data of the German sickness, invalid and accident insurance. In 1909 this institution spent 369 million marks for sickness, 189 millions were paid to invalids (including old age pensions) and 162 millions in accident cases, altogether 720 millions. Assuming that in Germany about one-fourth of the people are insured, we can readily calculate how much the whole people spends for sickness and accidents. The most important capital of the state and of society is man. Each human life represents a certain value. To preserve it in its fullest possible vigor is not only a humane task, but a duty in the interest of the state. This aim can only be attained by a compulsory sickness insurance. Such insurance should fulfill three chief requirements: 1. It should include all persons whose means do not enable them to take care of themselves in sickness. 2. It should furnish the best possible treatment. 3. It should provide the means for preventing sickness and for combating the spread of disease. A hospital in the country districts should serve not less than 5000 inhabitants. Diseases which require hospital treatment are infectious diseases, tuberculosis, grave acute diseases, cases of pregnancy where complicated labor may be expected as well as accident cases.

BOOKS RECEIVED FOR REVIEW

Radiography and Radio-Therapeutics. By Robert Knox, M. D. (Edinburgh), M. R. C. S. (England), L. R. C. P. (London), Consulting Radiologist, Great Northern Central Hosiptal, London; Captain R. A. M. C. (T.) 4th London General Hospital (in Charge of X-Ray Department). Cloth, pp. 383, with 78 plates, $9. The Macmillan Company, New York, 1917.

Burdett's Hospitals and Charities. By Sir Henry Burdett, K. C. B., K. C. V. O., editor of *The Hospital.* 1917. Being the Year Book of Philanthropy and the Hospital Annual. Twenty-eighth Year. Cloth, pp. 1017, 12 shilling 6 pence (63 cents duty). The Scientific Press, Ltd., London, 1917.

Disasters and the American Red Cross in Disaster Relief. By J. Byron Deacon, General Secretary, Philadelphia Society for Organizing Charity, Division Director of Civilian Relief for Pennsylvania. Cloth, pp. 215, 75 cents. Russell Sage Foundaton, New York, 1918.

Proceedings of the National Conference of Social Work. At the Forty-Fourth Annual Session held in Pittsburg, June, 1917. Permanent Headquarters, 315 Plymouth Court, Chicago.

Finding and Stopping Waste in Modern Boiler Rooms. A Reference Manual to Aid the owner, Manager, and Boiler Room Operator in Securing and Maintaining Plant Economy. Vol. 2. Flexible cloth, pp. 270, $1. Harrison Safety Boiler Works, Philadelphia, 1918.

The Baird-Dulaney Hospital Company, now operating the former Hosmer Hospital at Dyersburg, Tenn., has recently purchased a $10,000 residence in Dyersburg, which they propose to fit up for hospital purposes, operating it as an adjunct to the present hospital.

George W. H. Allen, of Pasadena, Cal., has announced his intention of erecting in connection with the Barlow Sanitarium, of that city, a hospital as a memorial to his friend, Justin Morell McKenna, of London, who was killed in action at Wasnes au Bac, France, October 2, 1917. Preference in the use of the building will be given to tubercular soldiers, it is stated.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Artificial Arms.

Since the beginning of the war in Europe, medical journals, as well as trade journals published abroad, have described at great length some of the many new devices that have been invented for the purpose of enabling the

Fig. 1. Dorrance arm, showing general construction.

soldiers who are unfortunate enough to lose a leg or an arm, to become again, at least to a certain extent, self-supporting. Since the entrance of our country into the conflict, it has become necessary for our surgeons to

Fig. 2. Arm applied, showing method of grasping table knife or any other implement by means of the utility hook.

familiarize themselves to a greater extent than heretofore with the products of the orthopedic specialists and the artificial limb-maker. We will endeavor to acquaint our readers with any new inventions of merit in this line that may be offered in the future, but for the present, we wish to call their attention to the "Dorrance Utility Arm." This arm is not exactly a recent invention, but we believe that perhaps certain important features of it have not been given the attention they deserve.

This apparatus consists of three parts; the arm, the hand and the Dorrance utility hook. The arm is made either of leather, wood or wood fiber, reinforced with steel ribs. The hand, like other artificial hands, is chiefly for the purpose of appearance, and the hook is the real useful part of the outfit. It is a most peculiarly shaped device, consisting in fact of two hooks, bent and hinged together in such a manner as to provide means of grasping and holding practically anything that can be held in the natural hand. It is opened by a shrug of the shoulders, no matter in what position the arm is in, and is closed by a spring. The spring is not made of metal, but consists of rubber bands. The reason for this is that a metal spring would have enough strength when new, but would become weak with use. The manufacturer states that he is aware of the fact that rubber bands also become weak and wear out, but new ones can be purchased at almost any store at a slight expense and replaced in a few moments by the wearer himself.

The hook and the hand can be rotated and are held firmly in any desired position by pressure against a rubber cushion. The hand is of willow, with movable thumb, and the thumb is operated by the same cord that operates the hook. As will be seen from the illustrations, the hand slips over the hook; therefore one never has to take the hook off.

Judging from the simplicity of construction and the ease with which it can be manipulated for doing practically all kinds of work, it seems that, especially for the laborer and mechanic, this is a most desirable artificial aid.

Useful Attachment to Operating Tables

The purpose of the arm-support or table shown below will be at once apparent to the reader. Dr. C. L. Lemon, Milwaukee, Wis., who in his capacity as surgeon for the Electric Light and Railway Company has many emergency cases to take care of, devised it to meet his requirements for operations on the hand and arm.

Arm-support, attachable to operating tables.

The table, when not in use, as will be seen from the

smaller illustration, occupies but very little floor space. It is adjustable in height and has distinct advantages over other means now being used for holding the arm for treatment, as it affords the surgeon access to the injured member from either side of the table. It is also very suitable for the administration of salvarsan, for blood transfusion, and for minor dressing about the hand and arm.

The table is mounted on a heavy cast-iron base; the upright has an extension with thumb-screw adjustment, and the top is hinged to allow for any adjustment that may be desired. The outfit is finished in white enamel, and, although it has a firm base, it is still light enough so that a nurse can carry it from one room to another, as the occasion may demand.

Substitute for Absorbent Cotton

That an apparently good substitute for absorbent cotton is now being offered at a considerably lower cost than regular absorbent cotton undoubtedly will be welcome news to the hospital world, especially at this time when there is such an unprecedented demand for absorbent cotton from all over the world.

Fig. 1. Sectional cut from a sheet of "Cellucotton."

This great demand has naturally had the inevitable effect of bringing the price of even a very poor grade of absorbent cotton to a figure at which a few years ago first-class material could be purchased.

This new substitute is being offered under the trade name of "Cellucotton." We are informed that this material has been given a thorough test in a number of first-class hospitals where it has been used in all kinds of surgical cases, and the reports submitted state without exception that the product has been found a satisfactory substitute for absorbent cotton. Scientific tests which have been made prove that the absorbing capacity of this preparation is much quicker than cotton, and that the total absorption capacity is only a few percent lower than that of a good grade of cotton. The average percentage of absorption of cotton in these tests was found to be 20.74, while the average absorbence of "Cellucotton" was 18.48.

Fig. 2. Roll of "Cellucotton" showing resiliency of the material.

The material is put up in rolls similar to cotton and can be sterilized in the regular manner.

Anesthesia Emergency Outfit

In order to improve operating efficiency, at a time when efficiency is most needed and when minutes mean lives, Dr. J. R. McCurdy, director of the department of anesthesia, Western Pennsylvania Hospital, Pittsburgh, Pa., had assembled an emergency outfit for each operating room. His aim was to have immediately and constantly at hand (literally at hand, because the table is always within reach of the anesthetist) apparatus and drugs adequate for quick management of all anesthetic accidents and operative shock. The equipment is such that the anesthetist can himself, without the aid of other help if necessary, promptly and quickly apply restorants, stimulants, etc.

The table he selected is of light sheet metal, white enameled and mounted on 5-inch rubber-tired wheels. The dimensions are 16 by 20 by 30 inches high.

On the top shelf are kept the following instruments and drug supplies:

1 Carmalt's tongue forceps.
2 Ferguson-Hewitt artificial airways, adult and child.
1 Stille throat sponge forceps.
2 mouth-gags (Denhardt's or Roser-Koenig).
1 hypo tray containing:
  1 syringe loaded with camphorated oil.
  1 syringe, ordinary, empty.

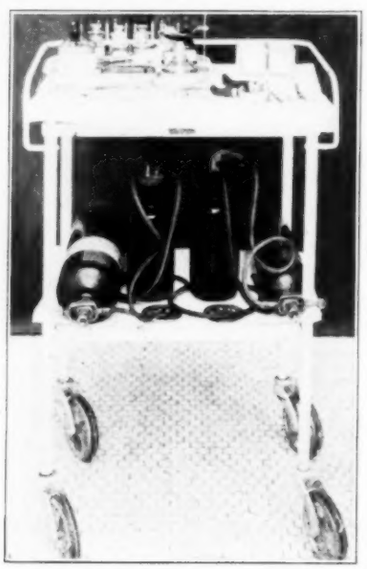


Fig. 1. McCurdy anesthesia emergency outfit.

Tablets or ampules of morphine sulphate gr. ⅛, morphine gr. 1/6 and atropine gr. 1/100, strychnine sulphate gr. 1/30, nitroglycerine gr. 1/100, digalen, caffein and sodium benzoate, ergot, pituitary extract, bottles of adrenalin chloride, spiritus frumenti, olive oil, alcohol, sterile water, camphorated oil.
2 small ointment jars containing lysol and alcohol sponges.
2 ¼-pound cans ether (Squibb's) with wick corks.

On the lower shelf there are constantly kept ready for use two complete oxygen wash-bottle sets, with outlet tubing long enough to reach easily to the patient's face, one a "style B" pure oxygen cylinder, the other a "style D" cylinder containing 90 percent oxygen and 10 percent carbon dioxide. Dr. McCurdy considers this latter mixture the most valuable resuscitating agent in the entire equipment, as he has found it the most prompt and efficient stimulant in conditions of respiratory depression or shock from almost any cause except pure asphyxia. He further states that its effect on both respiration and circulation is most gratifying, and that in cases of insufficient ventilaton he frequently exhibits a slow stream of it underneath the ether inhaler (a Ferguson) at intervals throughout the administration of ether.

The instruments on the table were selected from the standpoint of efficiency and proper care of the patient. The Carmalt forceps for holding the tongue was chosen because, when properly applied, causes neither injury nor

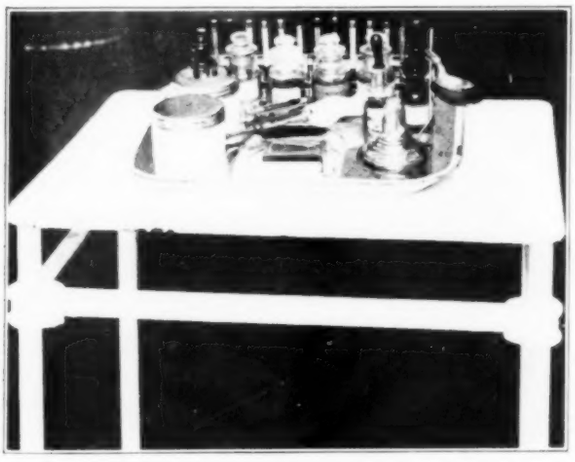


Fig. 2. Western Pennsylvania Hospital hypodermic tray.

pain; the Ferguson-Hewitt airway because it is light, easily adjusted, self-retaining, and there is no possibility of accidental drops of ether reaching the throat. The Stille throat sponge forceps was selected because of its curved shank and strength; the Roser-Koenig mouth-gag for opening the jaw when teeth are set, and the Denhardt for keeping the mouth open for ventilation or taking care of vomiting.

The hypodermic tray is one especially devised by the Western Pennsylvania Hospital Training School. It consists of a nickel-plated rack or holder for hypodermic tubes, glass-stoppered bottles and ointment jars, made to fit neatly on a rimmed white-enameled tray 10 by 12 inches. A useful feature is an alcohol lamp with large spoon attached by means of wire staff, the whole fitting into space in the rack.

The selection of hypo tablets, ampules, etc., has been gradually worked out as the most useful in the Western Pennsylvania Hospital surgical clinic, but the items can, of course, be changed to suit different surgeons and anesthetists.

New Office and Bathroom Scale

The "Detecto" is the name under which the scale illustrated here is being offered to the profession by the surgical supply houses. There are no coil springs, lifting beams or weights to be taken care of and all that is necessary is to step on the corkmat-covered platform and one's weight can be read off from the large dial.

The internal construction is extremely simple. Two flat, hardened steel bars, the ends of which are attached at one side to a steel post and on the other end to the weighing platfrom post, do the weighing. The spring steel

The "Detecto" office and bathroom scale.

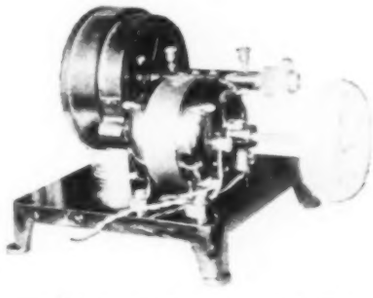
bars are of the same type as are used between axles and bodies of trucks and automobiles that carry tons of weight.

There is an adjustment device on the scale, by means of which it can be set, if a basket is put on the platform for the purpose of weighing a baby, etc. The scale is 12 inches in height, width, and length; the dial is 7 inches in diameter and is placed horizontally with the platform, showing every pound up to 300. The weight of the entire scale is 17½ pounds.

A Motor-Operated Knife-Cleaning and Silver-Buffing Machine

A knife-cleaning and silver-buffing machine has been developed and put on the market by the Ernest Koeppen organization of New York city. According to the type of motor supplied, the outfit can be used on circuits of 110- or 220-volt D. C. or on 60-cycle A. C. of 110 or 220 volts.

The complete device consists of a pair of patented cleaning or polishing brush-disks and a fractional horsepower General Electric Company motor, which drives the disks through gears. In addition to this it has a shaft



Motor-operated knife-cleaning and silver-buffing machine.

extension, to which a wheel can be attached for the purpose of buffing light silverware or rinsing coffee-pots or tea-pots, etc.

The knife-cleaning takes place between the brush-disks in the inclosed drum on the left of the motor, and it is claimed that the cleaning or polishing brush-disks will serve several hundred thousand knife blades without renewal, which when necessary can be done at a low cost.

The butt of the knife handle is polished by the special attachment at the right end of the backgear shaft.

LETTERS TO THE EDITOR

How to Avoid Monotony of Sanatorium Diets

To the Editor of THE MODERN HOSPITAL:

In a recent edition of the *Survey* there was published a short article on the monotony of sanatorium diets which should call to the attention of all hospital superintendents, their responsibility in supervising all the dietaries of their institutions.

In this article, considerable stress is laid upon the fact that sanatoriums carelessly allow the menu to be made up by the week and repeated over and over again, so that the meals falling on each week day are always the same.

In the hospitals and sanatoriums of the Department of Health of the City of New York, this condition has been overcome to a very large extent by preparing a series of menus running over a period of four weeks and then repeating this, insuring that there will be no repetition of the same meal on any week day. In these hospitals, an attempt is also made to prepare and serve the food much in the same way as it would be in any well conducted home, and in the dining rooms to place together those patients who are congenial and seem to desire mutual association.

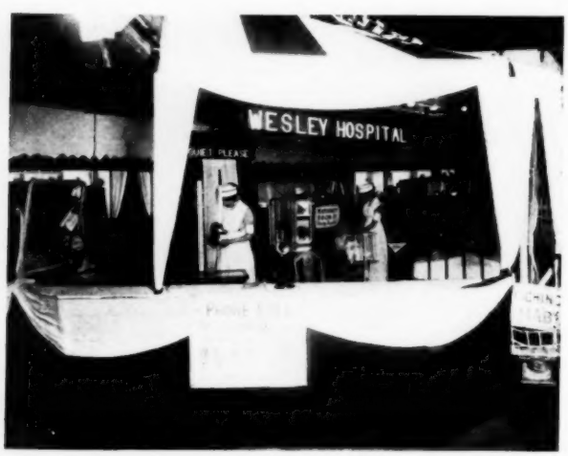
The questions of the value of food, its scientific preparation, its economical distribution are to be settled in the dietetic laboratory and not to be brought to the attention of the patients. Very good food is sometimes spoiled for the person to whom it is served by the many injunctions received in regard to it and the restrictions placed upon the patient as to the manner of its ingestion.

ROBERT J. WILSON,
Director Bureau of Hospitals, Department of Health of the City of New York.

Legitimate Hospital Advertising

To the Editor of THE MODERN HOSPITAL:

I ran across a photograph the other day that I thought might interest you. Some time ago in our city a pure food show was held in our largest auditorium. We are mailing you this photograph that you may see how the hospital did a little advertising. Each afternoon the head of the department of home economics of our high school delivered a lecture here to several hundred women. Of course, many mothers would have been denied the privilege of hearing these valuable lectures on home economics if no provisions had been made for looking after the little ones. So we had our nurses take care of the babies. The door under the "Quiet Please" sign leads to the nursery, while in the booth we attempted to represent one of our maternity rooms at Wesley.



The Wesley Hospital booth at the pure food show in Oklahoma City.

You will note that both of the signs "Wesley Hospital" and "Quiet Please" are electric. These were taken from the hospital. We have the "Wesley Hospital" sign in front of the hospital, while at the ends of the halls, going in any direction, we have one of these "Quiet Please" electric signs.

As a great many people were in attendance, and as only one phone was accessible and that phone hard to find, I had a telephone placed at our booth, as you will see, and connected up direct with my telephone switchboard at the hospital. So it was impossible for anyone to get central without having our operator at the hospital say "Wesley Hospital" when they would pick up the receiver. Then our operator at the hospital would give the party central and central would give them their number. I am a member of the Ad Club in Oklahoma City, and some of the men said this last stunt was "pretty poor (?)."

I did not know but that you might use this in getting some of our hospitals to take advantage of publicity of this character to get people more interested and sympathetic in the work that the hospitals are doing. We believe upon the whole that the advertising received by this means was most excellent.

F. K. CAMP, M. D.,
Superintendent, Wesley Hospital, Oklahoma City.

Reporting of Accidents from Local Anesthetics

To the Editor of THE MODERN HOSPITAL:

The Committee on therapeutic research of the Council on Pharmacy and Chemistry of the American Medical Association has undertaken a study of the accidents following the clinical use of local anesthetics, especially those following ordinary therapeutic doses. It is hoped that this study may lead to a better understandng of the cause of such accidents, and consequently to methods of avoiding them, or, at least, of treating them successfully when they occur.

It is becoming apparent that several of the local anesthetics, if not all of those in general use, are prone to cause death or symptoms of severe poisoning in a small percentage of those cases in which the dose used has been hitherto considered quite safe.

The infrequent occurrence of these accidents and their production by relatively small doses point to a peculiar hypersensitiveness on the part of those in whom the accidents occur. The data necessary for a study of these accidents are at present wholly insufficient, especially since the symptoms described in most of the cases are quite different from those commonly observed in animals even after the administration of toxic, but not fatal, doses.

Such accidents are seldom reported in detail in the medical literature, partly because physicians and dentists fear that they may be held to blame should they report them, partly, perhaps, because they have failed to appreciate the importance of the matter from the standpoint of the protection of the public.

It is evident that a broader view should prevail, and that physicians should be informed regarding the conditions under which such accidents occur in order that they may be avoided. It is also evident that the best protection against such unjust accusations, and the best means of preventing such accidents consist in the publication of careful detailed records when they have occurred, with the attending circumstances. These should be reported in the medical or dental journals when possible; but when, for

any reason, this seems undesirable, a confidential report may be filed with Dr. R. A. Hatcher, 414 East Twenty-Sixth Street, New York City, who has been appointed by the committee to collect this information.

If desired, such reports will be considered strictly confidential so far as the name of the patient and that of the medical attendant are concerned, and such information will be used solely as a means of studying the problem of toxicity of this class of agents, unless permission is given to use the name.

All available facts, both public and private, should be included in these reports, but the following data are especially to be desired in those cases in which more detailed reports cannot be made:

The age, sex, and general history of the patient should be given in as great detail as possible. The state of the nervous system appears to be of especial importance. The dosage employed should be stated as accurately as possible; also the concentration of the solution employed, the site of the injection (whether intramuscular, perineural, or strictly subcutaneous), and whether applied to the mouth, nose, or other part of the body. The possibility of an injection having been made into a small vein during intramuscular injection or into the gums should be considered. In such cases the action begins almost at once, that is, within a few seconds.

The previous condition of the heart and respiration should be reported if possible, and, of course, the effects of the drug on the heart and respiration, as well as the duration of the symptoms, should be recorded. If antidotes are employed, their nature and dosage should be stated, together with the character and time of appearance of the effects induced by the antidotes. It is important to state whether antidotes were administered orally, or by subcutaneous, intramuscular, or intravenous injection, and the concentration in which such antidotes were used.

While such detailed information, together with any other available data, are desirable, it is not to be understood that the inability to supply such details should prevent the publication of reports of poisoning, however meager the data, so long as accuracy is observed.

The committee urges on all anesthetists, surgeons, physicians, and dentists the making of such reports as a public duty; it asks that they read this appeal with especial attention to the character of observations desired.

TORALD SOLLMANN, Chairman,
R. A. HATCHER,

Special Referee, Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association.

He that knows not, and knows not that he knows not, is a fool.
Pass him by.
He that knows not, and knows that he knows not, is worthy.
Teach him.
He that knows, and knows not that he knows, is asleep.
Awake him.
He that knows, and knows that he knows, is wise.
Follow him.

—From the Arabic.

Dr. Alice M. Smith, who recently succeeded Dr. R. J. Cary as superintendent of the Mountain View Sanatorium, Pierce County's tuberculosis hospital, at Lake View, near Tacoma, Wash., has tendered her resignation to become effective May 1.

QUERIES AND ANSWERS

The Ten O'Clock Switch

To the Editor of THE MODERN HOSPITAL:

Our nurses' home, when reconstructed, is to be equipped with new and complete electric lighting. I would like, if possible, to have what I have heard called a "ten o'clock switch." Can you explain how this is planned in new nurses' home buildings, so that our local firm of electricians could carry it out?

TRUSTEE OF MIDDLE WEST HOSPITAL.

We take it that you mean some system of wiring your nurses' building so that the lights may be turned off all at one time in the rooms occupied by pupil nurses at 10 p. m. or at any other time. Any good electrician can make your wiring so that all the lights in your pupils' rooms can be on one switch, which will be located where it is under the supervision of your head nurse or matron, or whoever is responsible for this ruling. These wires, fuses, and switch control must be entirely separate from those which control lights in general living rooms, supervisors' rooms, halls, bathrooms, or utility rooms.

Inexpensive Memorial Tablets

To the Editor of THE MODERN HOSPITAL:

Do you know of some inexpensive way that a memorial tablet could be made to put in our entrance hall? We find that bronze and other metal tablets will cost more than we can afford to pay, and we wish to place a wall tablet in memory of a member of our board of trustees who always supported the hospital in a most liberal manner and left us a subtantial sum in his will.

CHAIRMAN OF COMMITTEE.

We noticed in a small hospital recently some very attractive tablets made in this way: Black glass or heavily black enameled wood of the required size was set in the wall; this was covered with heavy glass the same size and of good grade, on which the letters were made in heavy gold lettering. The glass was flush with the wall and the whole thing surrounded by an attractive molding corresponding to the general scheme of the woodwork used in the hospital hall. These tablets are not expensive and make a good appearance when finished.

What to Do With Washed Bandages

To the Editor of THE MODERN HOSPITAL:

When considering the conservation and reclamation of surgical dressings, it has always been a question in my mind whether it is worth while to wash the ordinary factory-made gauze bandages we buy by the pound, there being only a small percentage coming out of the laundry which can be rerolled or reclaimed. Can you tell us of any means other hospitals use to stop this waste?

HEAD NURSE OF A WESTERN HOSPITAL.

St. Mary's Hospital, Detroit, has a good plan for the reclamation of washed bandages. The best of the narrow bandages are thoroughly picked over, freed from threads and lint, resterilized and used for narrow packings.

These packings are softer and more absorbent than new gauze, and are preferred by the surgeons there.

The best of the wider bandages are moistened and rolled while wet. The waste is cut in definite lengths of about 30 inches, several dozen of these lengths are laid evenly together and sewed in the middle through another strip. These make splendid mops, are better than the commercial cord mop, and shed less lint on the floors.

Hospital Inventories

To the Editor of THE MODERN HOSPITAL:

What is your opinion in regard to hospital inventories? One hears so many arguments for and against them in hospital magazines and in reports of various association meetings.

SUPERINTENDENT OF A CITY HOSPITAL.

So far as our experience goes, a card index system of perpetual inventory, filed alphabetically and containing only the standard and not perishable things, is the best. Such card system should contain the name of the article at the top and headings across as follows: "Date of purchase," "From whom purchased," "Quantity," "Withdrawals," "Balance on hand," and space for remarks.

In each of your storerooms there should be two sheets, one containing memoranda of all receipts of goods and another of all those distributed. These should go to the bookkeeper every night. The form of these sheets would have to correspond somewhat to the stock and the needs of your hospital.

Special inventories must necessarily take a lot of somebody's time to keep up, and they are of no use unless kept up daily. For this reason their usefulness is often in doubt. If your hospital supplies of all kinds are carefully requisitioned, check kept of breakage and replacement, and your storerooms in charge of capable and conscientious people, a perpetual inventory, which must take so much of time and labor when both are needed for more important work to be done, may very well be dispensed with.

HOSPITAL ORGANIZATION IN NEW YORK CITY FOR WAR NEEDS

Work Accomplished by the Mayor's Committee on Hospital and Medical Facilities

Shortly before war was declared by the United States against Germany, Hon. John Purroy Mitchel, then mayor of New York City, realizing the desirability of thorough and timely preparation for the care of the sick and wounded in the event of hostilities, appointed a Committee on Hospital and Medical Facilities to organize the hospital facilities of the city for war needs. The central committee consisted of twenty-one members representing the federal government, some of the city departments and the principal hospitals in the city, with Dr. S. S. Goldwater, superintendent of Mount Sinai Hospital, as chairman, and Mr. Joseph J. Weber, executive secretary of the committee on hospitals of the State Charities Aid Association, as secretary. In order to secure the cooperation of the hospitals throughout the city, a Council of Associated Hospitals was organized. This council comprises representatives of all the hospitals in Greater New York with a capacity of one hundred or more beds.

The committee's first piece of work was to make a comprehensive survey of the emergency ward beds in public and private hospitals which could be placed at the service of the United States Government. The information gathered by this survey was carefully classified, tabulated, and sent to the Army and Navy Departments, the American Red Cross, and the Council of National Defense.

Because the limited facilities at the Brooklyn Navy Yard for the care of contagious disease cases were early exhausted, the Navy Department appealed to the Mayor's Committee for additional facilities. Through the committee, the New York City Department of Health placed facilities in its contagious disease hospitals at the service of the Navy Department.

Arrangements have also been made for the navy with a number of private hospitals in Brooklyn for the care of general medical and surgical cases transferred from the Navy Hospital. Between September 7, 1917, and February 11, 1918, 735 navy patients were transferred from the Navy Yard Hospital to various private hospitals, mainly in Brooklyn.

As the representative of these and other New York hospitals, the Mayor's Committee entered into an agreement with the navy relative to rates of payment for enlisted men and officers.

When the British Recruiting Mission established an office in New York City, they found themselves without a sufficient number of physicians to handle the large number of recruits and appealed to the Mayor's Committee for help. A number of volunteer physicians were furnished the mission.

The committee has acted as a clearing house for the Bureau of Health and Hospitals of the office of the Adjutant General of New York State, and has furnished that bureau with information regarding New York hospitals.

The committee has called the attention of the Board of Ambulance Service to the need of very definitely organized ambulance service for the transportation of returned sick and wounded soldiers and sailors, and has received the assurance of the Board of Ambulance Service of their cooperation and of the possibility of focusing at a given point whatever ambulances may be needed to meet an emergency.

At the request of the U. S. Navy Recruiting Station the committee has collected information from a number of hospitals as to their willingness to receive promising recruits for the treatment of minor physical defects which if corrected would make them eligible for service.

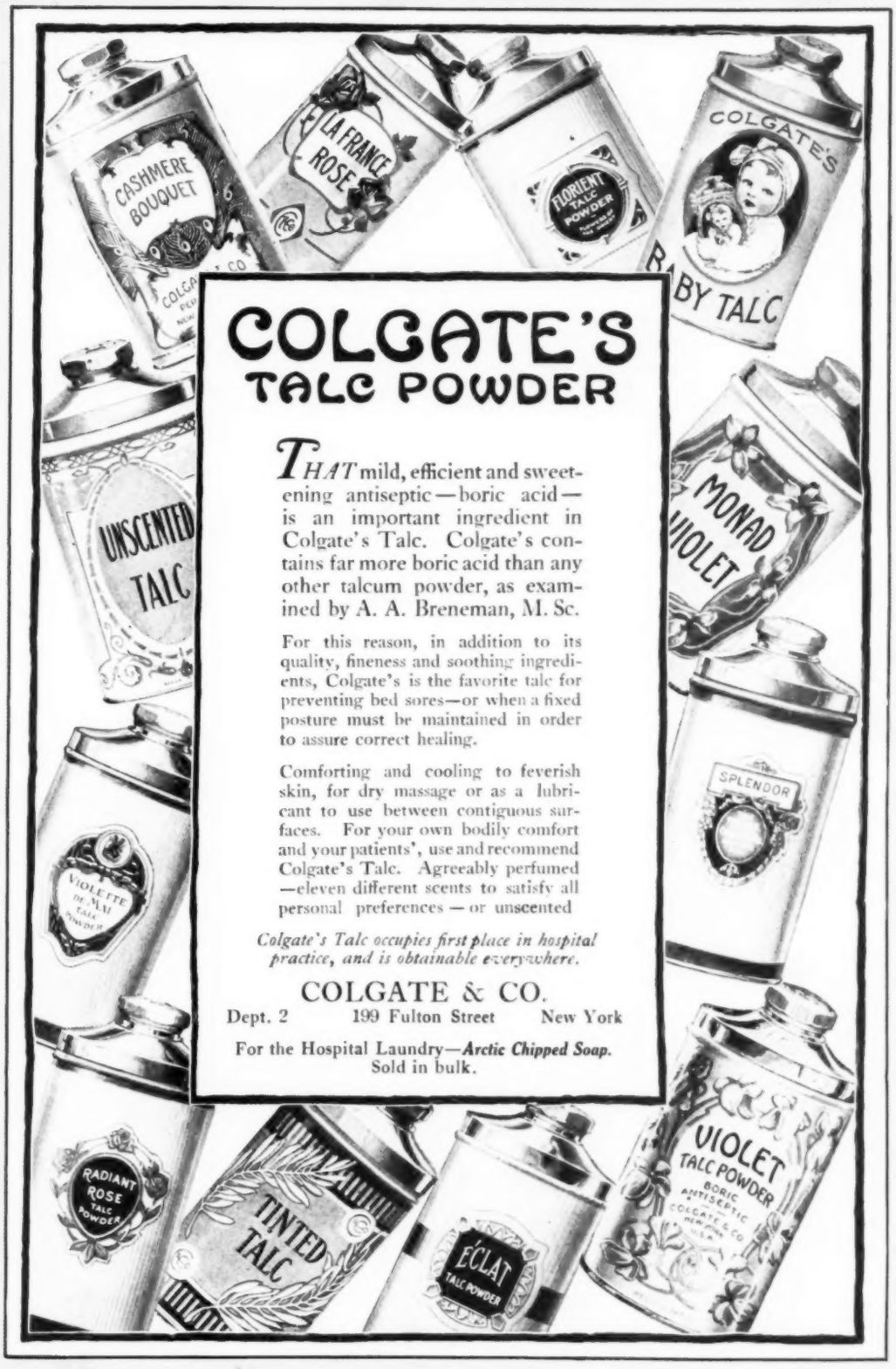
In the interests of the army no less than of the civil population, the committee last summer carried on a successful agitation for the enlistment in the Enlisted Reserve Corps of the Medical Department of second, third, and fourth year medical students and hospital interns, thereby permitting these students and interns to complete their medical training.

Last fall the committee sent a circular letter to all the medical schools of the country for the purpose of ascertaining the effect of the selective draft law upon the enrollment of first-year medical students. The information gathered showed that, contrary to expectations, the schools with some few exceptions had a larger enrollment of first-year students than usual.

At the request of the New York County Chapter of the American Red Cross, the committee arranged with several hospitals for the care, from time to time, of French soldiers and sailors in need of hospital treatment.

Arrangements were made with the Board of Ambulance Service for the transfer of general medical, surgical, and contagious cases from Camp Mills to Willard Parker, Rockefeller, and other hospitals.

The committe also made arrangements for the transfer of about 180 cases from Base Hospital No. 1 to various civil hospitals, in order to make room for cases transferred from Camp Mills.



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REMITTANCES.—Remittances for subscriptions should be made by check, draft, post office or express money order, or registered letter. Make all checks and money orders payable to "The Modern Hospital Publishing Company."

CHANGE OF ADDRESS.—Notice of change of subscriber's address should give both old and new address. Notice should reach us fifteen days in advance of date of publication.

COMMUNICATIONS.—When communications relate to more than one subject (manuscript, reprints, subscriptions, news items, etc.), correspondents will confer a favor by writing on a separate sheet for each subject, thereby insuring more prompt attention.

ADVERTISEMENTS.—The advertising pages of THE MODERN HOSPITAL are available for announcements of anything of interest and service to those engaged in the erection, equipment, administration, and in the medical, surgical, and nursing services of hospitals, sanatoriums, and allied institutions. Advertisements of secret remedies and other objectionable announcements will not be accepted. The supervision of the Editors is extended to the advertising columns, in which only approved products and reliable manufacturers will be represented.

CLOSING OF FORMS.—Advertising forms close on the 10th for the issue of the following month. Ample time should be allowed for composition of advertisements and the sending and return of proofs.

ADVERTISING RATES.—Advertising rates will be sent on request.

CONTRIBUTIONS.—Original articles on any problems of practical interest to our readers are respectfully solicited from those who can write authoritatively on hospital architecture and equipment, institutional efficiency, and administrative medicine. Articles are accepted for publication with the understanding that they are contributed solely to THE MODERN HOSPITAL. French and German articles will be received and translated free of charge if found desirable for publication.

ILLUSTRATIONS.—Such half-tones and zinc etchings as in the judgment of the Editors are necessary to illustrate articles will be furnished when photographs, drawings, or ink tracings are supplied by the author.

NEWS MATTER.—Our readers are requested to send in items of news, and also marked copies of newspapers containing matters of interest to those engaged in hospital work. We shall be glad to know the name of the sender in every instance.

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NEWS OF THE HOSPITAL FIELD

Eastern States

Miss Elizabeth Shaw has lately been placed in charge of the Altoona Hospital, Altoona, Pa.

Plans are being made for an addition to the Mercy Hospital, Baltimore, Md., to cost approximately $100,000.

The Ossining Hospital, Ossining, N. Y., received in January a gift of $25,000 from Mr. and Mrs. William Rockefeller.

The borough council of Mahanoy City, Pa., has named a committee of 50 leading citizens to arrange for and build a hospital.

The Mullens General Hospital is a new corporation at Mullens, W. Va., which proposes to open a hospital in the near future.

Plans are being made for a new building for the state preventorium at Hoxsie, R. I., to be used especially for winter work.

Through the will of the late Thomas Butcher, a retired farmer, of Geneva, N. Y., the Geneva Hospital is to receive a bequest of $20,000.

The establishment of a hospital in connection with the Sophia Little Home, Providence, R. I., is contemplated by the managing officials.

The Williamsport Private Hospital, Williamsport, Pa., valued at $50,000, was burned January 28. All of the patients were safely removed.

The Navy Department has taken over the Boston Floating Hospital to be used as an annex to the naval hospital at the Charleston Navy Yard.

A $30,000 fireproof building of 20 single rooms has recently been added to the nurses' home of the Hahneman Hospital, Philadelphia, making the nursing capacity 116.

A new home for male attendants at the State Hospital at Warren, Pa., is being planned. This institution will also erect in the near future an addition designed to accommodate 250 patients.

Mr. A. N. Spector, for a number of years superintendent of New York hospitals, has lately become connected with the Department of Health and Charities of the Canal Zone, Isthmus of Panama.

Sister Loretto, for 40 years in the service of St. Mary's Hospital, Brooklyn borough, New York City, and who for the last three years has been in charge of that institution, died at the hospital January 19, in her seventy-third year.

The Onondaga Hospital Association, Syracuse, N. Y., has recently opened a general hospital in the former Hiscock mansion at No. 415 West Onondaga street, that city. Dr. G. W. Shoemaker is president of the association.

Miss Etta Robbins has resigned the superintendency of the Batavia Hospital, Batavia, N. Y., to take up Red Cross work, and has been succeeded at the Hospital by Mrs. Lillian Schraft, a graduate of the Buffalo General Hospital.

The vacancy in the University Hospital, Baltimore, caused by the resignation of the business manager, Henry H. Warfield, now in charge of the army base hospital at Camp Meade, has been filled by the appointment of William Jordan, a former hotel man.

The Locust Mountain Hospital Association has been chartered to establish and maintain a community hospital

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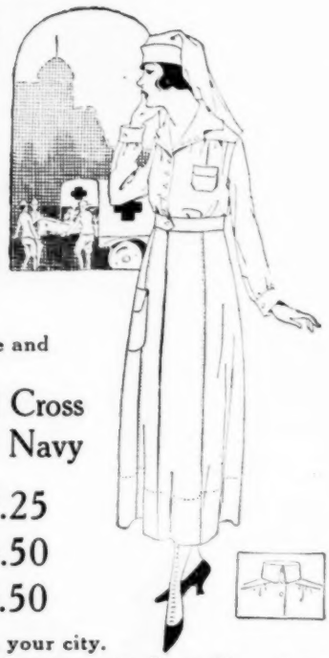

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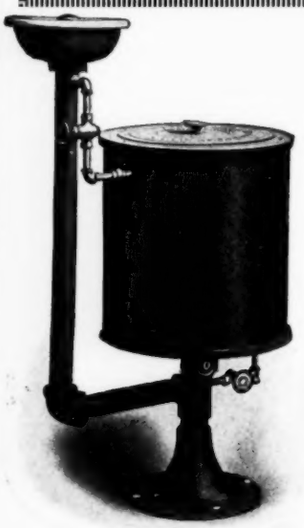

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at Shenandoah, Pa. Preference will be given by the institution to cases resulting from accidents in the mines or on the railroads in Shenandoah and its vicinity.

New York City has an ordinance requiring every hospital and asylum, as well as lodging houses, department stores and public schools, to provide an interior alarm system, by means of which alarms of fire or other danger may be instantly communicated to every part of the building.

Mrs. Lillian Schraft and Miss May Baldwin, both of Buffalo, assumed the duties of superintendent and assistant superintendent, respectively, at the Batavia Hospital, Batavia, N. Y., February 5. Miss Marie Vandeventer, of Machias, N. Y., has been installed as dietitian at the same hospital.

Dr. John Bassett Chapin, formerly president of the American Psychological Association, and physician-in-chief at the Pennsylvania State Hospital for the Insane at Philadelphia, and who had been medical superintendent of the state hospital at Willard, N. Y., died at Canandaigua, N. Y., January 19.

St. John's Hospital, Lowell, Mass., is making arrangements for rebuilding and enlarging its plant. Besides the remodeling of the present building, the improvements will include a new home for the nurses of the institution, a new addition accommodating 84 patients, and a new power plant and laundry. All of the new buildings will be of fireproof construction.

Mr. Oliver H. Bartine, who was formerly superintendent of the Flower Hospital, is now the Vice-President and Managing Director of the Jamison-Semple Company, New York City. Mr. Bartine will also have charge of the Hospital Consultation Department of this company which has been organized to give assistance and advice in the planning, construction, equipment, and operation of institutions for the care of the sick.

The American Red Cross is arranging to establish at 311 Madison avenue, New York city, a school for disabled and crippled men and for the reeducation of maimed soldiers and sailors. The undertaking will be supervised by a committee, of which Douglas C. McMurtrie is director. Members of the staff which will conduct the institution have spent six months studying methods employed in Europe in the rehabilitation of disabled soldiers.

In connection with the Zionist movement, Mrs. Peter J. Schweitzer, of Brooklyn borough, New York City, has announced her intention to donate $25,000 for the establishment in Palestine of a hospital for eye diseases. Dr. Joseph Krimsky, of Brooklyn, will have charge of the erection and equipment of the hospital, and with a staff of American physicians and nurses will sail for the Orient within the next few weeks.

The capacity of the war hospital established some months ago by Columbia University, New York City, has been practically doubled, and accommodations for 1000 patients are now provided. The hospital was intended for the exclusive care of sick and wounded soldiers brought back from the front in France, but only about 200 such cases have been received up to this time, and approximately the same number have been admitted from army training camps in the United States.

Zenas L. Potter, advertising manager of the National Cash Register Company, Dayton, O., and formerly head of the company's welfare department, has been appointed head of the department of welfare which has been created by the government for the purpose of providing suitable recreation and other care for the thousands of young women now employed in the plants of the Ordnance Department at Washington. Mr. Potter will devote all of his time to the work until the end of the war.

Southern States

Plans are being prepared for a new building for the Hilltop Sanatorium, at Danville, Va.

Miss Mary Foreman has been appointed superintendent of the Riverside (City) Hospital at Paducah, Ky., succeeding Mrs. E. K. Martin.

A proposition to issue bonds in the sum of $30,000 for

What a simple, satisfactory, and inexpensive solution to our ventilation problem!

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Sanitary Cloth Window Ventilators

have done away with complaints from patients about drafts, dust, and soot from open windows. No rain or snow coming in. No trouble and no expense connected with their installation.

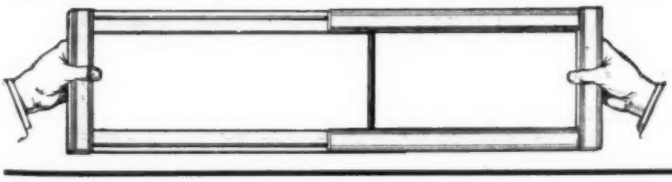
The *Continental Ventilator* lets light through, yet obstructs the view. It supplies plenty of pure, clean, fresh air, but eliminates the dangerous draft. It keeps out dust, soot, smoke, rain, and snow.

This ventilator is made like an adjustable window screen—is built strong and durable. It consists of a hardwood frame, adjustable to any size of window opening.

The ventilator is covered with a specially treated cotton fabric of a very fine mesh, an efficient filter for air.

The better ventilation, the purer air, the saving in laundry, and the satisfaction to patients justifies the installation of the *Continental Ventilator* in your wards, your private rooms, the nurses' home, the kitchens, and other places in the hospital where pure, clean, and fresh air is desired.

Send for descriptive circular and prices today. No doubt your department store or retail hardware dealer handles the Continental. It is used and sold in almost every city.



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Pettijohn's is a bran food made to doctors' orders.

The 55 percent of rolled wheat gives a basis which everybody likes. The 20 percent of oat flakes adds a delightful flavor. And the bran flakes make it efficient.

Half the users, probably, never think of bran. It is inconspicuous. People gladly continue it and thus get continued bran effects.

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Soft, flavory wheat and oats rolled into luscious flakes, hiding 25 percent of unground bran. A famous breakfast dainty.

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Chicago

the erection of a county hospital was submitted to the voters of Matagorda County, Tex., in February.

Plans for a complete new home for the International & Great Northern Railway Hospital at Palestine, Tex., have been abandoned, but the present building will be repaired.

Dr. J. W. Fowler, former superintendent of the Louisville City Hospital, Louisiana, Ky., is now serving the University of Virginia Hospital at Charlottesville in the same capacity.

The residence of the late Mrs. Ellen E. Fitzgerald at Monroe, N. C., bequeathed to the city for hospital purposes, is being remodeled and equipped for the accommodation of patients.

Dr. M. R. Pratt has resigned the superintendency of the University of Virginia Hospital at Charlottesville to become superintendent of the Central Emergency Hospital, Washington, D. C.

Mr. O. E. Nicholls, superintendent of the Macon Hospital, Macon, Ga., has accepted an appointment for Red Cross service and was expected to sail about February 23 for active work in France.

The Austin Presbyterian Sanitarium, Austin, Tex., was burned February 2. Although there were nearly 50 patients in the building, no loss of life occurred. The property loss is estimated at $25,000, but is said to be largely covered by insurance.

A hospital for insane persons is to be erected by the state of Texas at Wichita Falls this year, at a cost of $400,000. The institution will be known as the Northwest Texas Insane Asylum. It is expected to be ready for patients early in 1919.

Construction work will be started in Memphis, Tenn., in May, on a Methodist Hospital, which will cost approximately $400,000 and have facilities for the care of 450 patients. Methodists of Tennessee, northern Mississippi, and Arkansas are cooperating in the undertaking.

A series of buildings, the cost of which will be approximately $500,000, is provided for in tentative plans for a new city hospital at Little Rock, Ark. According to these plans, the main building will be a 4-story structure, 45x120. Concrete and brick fireproofing construction with stone and terra cotta trimmings, is contemplated.

The Meridian Board of Trade, Meridian, Miss., has given its indorsement to a movement for the erection jointly by Lauderdale County and the City of Meridian of a large charity hospital; which it is proposed to present to the state, and which, according to the plan, would be maintained by the state for the benefit of residents in the eastern section.

The Lubbock Sanitarium was opened at Lubbock, Tex., in January. The institution, which is owned and operated by Dr. Arvel Ponton, Dr. J. T. Hutchinson, and Dr. O. F. Peebler, all of Lubbock, is housed in a new fireproof building equipped for medical and surgical cases, and accommodating 100 patients. X-ray and pathological laboratories are maintained.

Miss Florence Bishop, of Harrisonburg, was elected president of the Graduate Nurses' Association of Virginia at the close of the eighteenth annual convention of the Association in Richmond, February 2. Other officers for the ensuing year are as follows: First vice-president, Miss Agnes Randolph; second vice-president, Mrs. Frank Costenbader; secretary, Miss Josephine McCloud; treasurer, Miss Evelyn Edmunds; all of Richmond. More than 200 nurses attended the meeting.

The Presbyterian Hospital, Charlotte, N. C., has recently moved into the former Elizabeth College building, which has been remodeled for hospital purposes at a cost of $15,000. The facilities of the hospital have been greatly improved, and the capacity increased to the extent that 10 additional nurses, an assistant superintendent, and night superintendent are now required. X-ray and pathological laboratories are included in the improvements. Miss Ella MacNichols, superintendent of the institution in its old quarters, will continue in charge.

The Dallas Baby Camp, established at Dallas, Tex., in a tent, in 1914, by the Dallas Graduate Nurses' Associa-

LEMON JELL-O

Time Savers

JUST now when dietitians and nurses have more duties than ever before, minutes count. Such helps in the kitchen, dining room, hospital ward or sick room as save minutes are surely worth accepting.

You may rely upon Jell-O as being one of these.

No cooking, no adding of sugar or other material, but everything ready for the finishing touch which is given in a minute.

The easiness of the "process" of making gelatinous dishes from Jell-O has been a revelation to nurses in particular. The matter of *time* is one of very great importance, and so is the matter of finishing up a fine dessert or salad in a minute or two instead of half an hour or more.

Minutes Count

Not only do minutes count, but time spent in unnecessary "fussing" is worse than wasted, for it is attended with a desire to say bad words or kick something. When you have figured it out that time is saved by using the ready-made Jell-O for desserts and salads instead of "puttering" with different materials in attempts to get the same result, you will not need to be told that you save money too.

Cost Savers

For Jell-O costs only 10 cents a package, and that includes sugar and ***everything.***

The 1918 Jell-O Book, just out, contains more new recipes than any has ever before and they are useful recipes. A copy of the book, beautifully illustrated, will be sent to you free if you will send us your name and address.

Jell-O is put up in seven pure fruit flavors: Strawberry, Raspberry, Lemon, Orange, Cherry, Peach, Chocolate.

10¢ a package

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The Charm of Quiet Color

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Liquid Velvet is an enduring flat enamel with an oil base. It may be washed repeatedly.

Other O'Brien products especially adapted for hospital use are Flexico White Enamel, Master Varnish, and Pyramid Floor Finish.

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Nickel-plated Cabinet

Because it is the toilet room system that is absolutely sanitary, thoroughly efficient, and the most economical.

ONLIWON HYGIENE is the combination of an interfolded package of sanitary tissue sheets and a cabinet which protects each sheet from dust and germs, serves just two at a time, and PREVENTS WASTE. ONLIWON Toilet Paper is of fine quality, but low in price—made of the highest grade material — 1,000 soft, firm, full-sized sheets, cut and folded by machines in an inconceivably small package—reaches you untouched and uncontaminated.

ONLIWON Cabinets are so simple that not a minute is required to insert the ONLIWON package. They are attractive and durable—use can not injure them—no knobs to turn —nothing to get out of order.

Why, then, is your institution not equipped with ONLIWON?

Bring this advertisement to the attention of the proper person and ask him to write us, stating the number of fixtures required to FULLY equip your toilet rooms. We will send special prices and information showing *actual savings* made by various institutions who use ONLIWON.

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tion, and now housed in a frame cottage, is soon to have a modern hospital building costing $25,000. For some time Miss May Smith, superintendent of the camp, has displayed at its entrance a sign reading, "The Dallas Baby Camp Will Some Day Be a Children's Hospital," and with friends of the institution, she has been working toward that end, with the result that architectural plans, all necessary material and construction work, and $2,000 in cash have been donated to make the building a certainty. The Dallas Rotary Club has offered to conduct a campaign to raise any additional funds that may be needed. Accommodations for 100 babies will be provided and arrangements will be made to receive pay patients as well as children of the needy poor, to the care of whom the camp has heretofore been devoted.

Middle Western States

The Walker Hospital, Evansville, Ind., has recently opened a new home for its nurses.

It is reported that Dr. H. E. Funk, of Culbertson, Neb., will erect a hospital at that place in the spring.

A. E. Patten, of the city clerk's office in Omaha, has been made superintendent of the county hospital located in that city.

Miss Francis Clemo has been appointed superintendent of a new contagious disease hospital at Highland Park, Mich.

Constructive work will be started in Quincy, Ill., early in the spring on a 30-bed tuberculosis hospital for Adams County.

Mrs. Summers has purchased a residence property at Tracy, Ia., and is having the house remodeled for a private hospital.

Dr. Rush R. Richison, of Yellow Springs, O., has lately assumed the duties of superintendent at the District Tuberculosis Hospital, Springfield, O.

Dr. Elliott Washburn, general manager of the Kansas City (Mo.) General Hospital, has recently resigned. It is reported that Dr. T. F. Miller, a local physician, will probably be elected to fill the vacancy.

The Fremont Hospital, Fremont, Neb., has lately been sold to Mrs. Marie White, a trained nurse. Miss Hanora Kelly, the former owner, is said to be preparing to join a Red Cross hospital unit in France.

The Cook County Hospital, Chicago, with all of its facilities and the services of its staff, has been offered to the War Department for the training of medical officers. The hospital has a capacity of 2400 beds.

Plans for a general hospital to be erected in Oklahoma City by the state have been completed, and the construction of the building, which is estimated to cost $150,000, will probably be started in March, it is announced.

A new Methodist hospital was opened at Aberdeen, S. D., in February. The building, which cost $115,000, is a 3-story brick structure, with a capacity of 100 beds. Miss Veletta A. Kettering, of Minneapolis, is superintendent.

The sisters who conduct St. Joseph's Hospital at Bloomington, Ill., are finding it necessary to provide for a larger number of patients than their present facilities permit, and the erection of an addition to their building is contemplated.

The question of establishing a Methodist Hospital in the building at Fort Wayne, Ind., formerly occupied by the Hope Hospital, was discussed at a meeting of prominent Methodists recently held in Indianapolis. A committee was appointed to investigate the matter.

According to the Kansas City Journal, a $150,000 apartment and hospital building will be erected at Excelsior Springs, Mo., in the near future, by the Manitoba Investment Company, a Missouri corporation, of which Dr. Charles O. Ozias, of Kansas City, is president.

F. D. Jones, formerly of Harper Hospital, Detroit, Mich., has accepted an appointment as superintendent of the Detroit Receiving Hospital. This position was formerly combined with that of medical director and was held by Dr. Leo J. Dretzka, now on leave of absence for training for

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It is neutral in colors—truly nature's carpet. Made only in the natural camel color of flax itself, it is restful even to the most nervous patient, and its neutrality blends perfectly with the interior decorative schemes of the modern type of institution.

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Reversible, tightly woven, thick, flat-lying, made in varying widths up to 12 feet, and any length, Klearflax Natural Rugs are usable in the small sizes in bath rooms, while the larger sizes meet all requirements for wards, private rooms, and halls.

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24″ x 42″	$ 3.50	6′ x 9′	$24.00
27″ x 54″	4.50	8′ x 10′	35.60
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They are 10 percent over wheat.

They form a uniquely balanced food with all the needed elements, including vitamines and bran.

They are rich in phosphorus and lecithin.

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Quaker Oats supply nutrition at a cost of five cents per 1000 calories.

In other foods those same food units average about as follows:

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Seven full meals on Quaker Oats cost the same as one ham-and-egg meal.

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The Flavory Flakes

Quaker Oats excel in flavor because we use the queen grains only—just the plump, rich oats. We get but ten pounds from a bushel. They won supreme place because of that flavor—a world-wide preference. Yet they cost no extra price.

The Quaker Oats Company

Chicago

war service in the brain surgery section of the medical corps.

One bed-ridden patient was burned to death in a fire which destroyed the Grandview Sanitarium in Kansas City, Kas., January 29. All other patients were safely removed to the Bethany Hospital. The sanitarium confined itself mainly to the care and treatment of mental and nervous cases and was owned by Dr. S. Glasscock. It has been reopened in temporary quarters, awaiting the completion of a $100,000 fireproof building to replace the burned structure. The new building will be started this spring.

Rocky Mountain and Pacific Coast States

A new county hospital was opened at Yuba City, Cal., in February.

The Gilroy Hospital, Gilroy, Cal., has lately moved into more suitable quarters.

A new home for the nurses of the Pomona Valley Hospital, Pomona, Cal., will be erected this year.

Construction work has been started at Centralia, Wash., on a $50,000 hospital for Dr. Lee A. Scace, of that city.

Ground was broken in Phoenix, Ariz., for a new Deaconess Home and Hospital to be erected at a cost of $100,000.

The government is building a $100,000 ward for ambulant tuberculosis patients at the army hospital, Fort Bayard, N. M.

A movement for the erection of a hospital to be conducted by an order of Catholic Sisters has been launched at Silver Lake, Ore.

The hospital board of the Santa Fe Railway is taking preliminary steps toward the erection of a new plant for the Santa Fe Hospital at Las Vegas, N. M.

Funds are being sought by the Deaconess Hospital at Wenatchee, Wash., for the erection of a 40-bed addition to include a men's ward, a women's ward, and a special maternity ward.

Three new buildings will be added this year to the State Hospital for the Insane, Norwalk, Cal. The hospital at Norwalk is one of the newer California state institutions. It now has a capacity of 300 patients.

Members of the Southern Baptist Association visited New Mexico cities in February with the view of selecting a site for a large tuberculosis sanatorium which the association will establish in the near future.

Henry G. Yearick, who has been secretary of the board of trustees of St. Luke's Hospital, Spokane, Wash., for several years, has lately been elected superintendent of that institution, succeeding Miss Johanna Burns, resigned.

An accredited training school for nurses is soon to established at the San Bernardino County Hospital, San Bernardino, Cal., according to Miss Gabrielle Tissot, superintendent of nurses. The hospital has recently moved into new quarters.

"St. Luke's-in-the-Desert" is a new sanatorium at Tucson, Ariz., for convalescent tubercular men. The institution, which is designed to accommodate only a small number of patients at a time, was opened in January under the auspices of the Episcopal church.

St. Anthony's Hospital, a new 60-bed institution, was opened at Pocatello, Idaho, late in January. The building and equipment are said to represent an expenditure of $125,000. Sisters from the Judge-Mercy Hospital at Salt Lake City will conduct the hospital.

Miss Stella Peterson has been installed as superintendent of nurses at Dee Hospital, Ogden, Utah, vice Miss Stella Sainsbury, resigned. Miss Peterson was formerly superintendent of nurses at the county hospital in Salt Lake City, where she has been succeeded by Miss Daphne Dalton.

A new curriculum for the training of nurses at the University of California has been approved by the California State Board of Health. The new plan allows a 3-year course in the university to be followed by two years in the training school at the university hospital, in place of the three years in the hospital formerly required. It also provides that one year's credit will be given to women gradu-

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ates of the university toward a 3-year nurses' training course in the hospital. The same kind of an arrangement is in effect at Stanford University.

A campaign has been launched by friends of the Deaconess Hospital at Bozeman, Mont., for the purpose of raising $100,000 toward a fund with which to build a new home for that institution. The Deaconess order will contribute $40,000 additional, so that a $100,000 building may be erected.

The Goldfield Mine Operators' Association will assume direct management of its hospital in Goldfield in the near future. The building will be refurnished and will hereafter be known as the Association Hospital. Miss Freda R. Bergstrom, a registered nurse, of Minneapolis, has been chosen superintendent.

The California cities of Los Angeles and San Diego were among the first in the country to respond to the request of the government for special precautions to protect the men of the army and navy against infectious diseases. Both of these cities have established special hospitals for the treatment of venereal diseases and drastic measures have been instituted to discourage commercialized vice. The Los Angeles hospital has a capacity of 50 beds.

Canada

A number of small children, variously reported at 38 to 50, lost their lives in a fire which partially destoyed the Great Guy Street home and hospital of the Grey Nuns in Montreal, Que., February 14. Several hundred adults, including aged, sick, or crippled persons and 200 wounded soldiers, were in the building, but all of these escaped or were removed by heroic efforts of the sisters, firemen, and others. The children were in the part of the building where the fire started and appeared to have been suffocated by the smoke before aid could be given.

HOSPITALS FOR TUBERCULOUS NEGROES

The South's Urgent Need for Tuberculosis Hospital Facilities for Negroes—Tuberculosis in the Negro a Menace to the White Race

An interesting and instructive symposium on the crying need for tuberculosis hospitals for negroes in the South is contained in a paper by Dr. Martin F. Sloan, superintendent of Eudowood Sanatorium, Towson, Md., and the discussion thereon, published in a recent number of the *Southern Medical Journal.* Dr. Sloan says, on the authority of the 1916 Directory of the National Association for the Study and Prevention of Tuberculosis, that there are in the South 59 public or semipublic sanatoriums, with a combined capacity of 4,130 beds. Of these 4,130 beds, however, only 114 are for negroes.

"It is a reflection upon the far-sightedness of the people," remarks Dr. Sloan, "that less than 3 percent of the public beds are allotted to a race that constitutes 29.8 percent of the population and one that succumbs to the disease in the proportion of about 3 to 1 white."

The negro's susceptibility to tuberculosis is well known. Owing to the lack of mortality and morbidity statistics in the South, it is impossible to compute the number of cases or of deaths. On the basis of official returns from Southern states in the registration area, and from registration cities in the remainder of the South, Dr. Sloan finds a total of 7,782 deaths reported among Southern negroes. This number, he remarks, probably represents no more than a third of the real total. Dr. Sloan accepts, as probably not excessive applied to the negro, the estimate of Sir Robert Phillip, of Edinburgh, that each death from tuberculosis represents ten infected persons. The occupations followed by negroes bring them into such close personal contact with whites as practically to insure infection of whites by the infected negro population.

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ing nurses, and educational publicity campaigns, Dr. Sloan emphasizes above all other the need for hospitals where the incurable may pass their last days in peace and comfort removed from the possibility of infecting the healthy, and where the curable may be nursed back to an economic "cure" or arrest. He believes that each state should have for hopeful cases in the earlier stages a large, well-organized sanatorium on the colony plan. Entertainment, exercise, and teaching should be given prominent place; in particular, all possible forms of open-air industry should be provided for the patients. Instruction in hygiene and sanitation would make the recovered patients, on their return home, health missionaries in their respective communities. While proper management and a sympathetic attitude on the part of the medical and nursing staffs would in time overcome the reluctance of patients, Dr. Sloan believes that, if necessary, laws should be enacted rendering entrance compulsory and requiring obedience to rules and a minimum stay of at least six months. Each county and city also should have a small hospital for the hopeless and dying.

The lack of provision for tuberculous negroes and the resulting danger to the white as well as the negro population were emphasized in the succeeding discussion. Dr. R. K. Flanagan, of Richmond, Va., offered a constructive suggestion:

"We have in Virginia the Negro Organization Society—an organization of all the negro organizations—and I want to tell you it's *some* organization. . . . This society has taken as its job the sanitation and improvement of negro homes. The fact was placed before this organization that the penitentiary and the lunatic asylums of the state were the only places where any tuberculous negro could get adequate treatment; he had to commit a felony, steal a horse, or break into a house, before he had any chance to get well of consumption. The law-abiding darky with consumption could only die, which he soon did after infecting unnumbered other folks. This fact being borne in upon these negroes, they set to work and raised a fund. Their appeals went broadcast, and the little societies everywhere sent in contributions, many of them in pennies and small amounts. This society then came before the legislature and said: 'Gentlemen, we have $3,000 with which to buy the farm or to help construct a sanatorium for our people,' and what could the legislature do under the circumstances? They had to come across, and so an appropriation of $20,000 a year for two years was made available for this purpose. The negroes will respond right along if we just give them a show and tell them specifically what they can do, and make them see the need of their cooperation. They are numerically very strong, and there is a whole lot of money among them. They don't mind spending their money, for they believe that money is only made to spend, so it's just 'come and go' constantly. They had just as soon it would go for a good thing as a bad thing, and when people in whom they have confidence put it up to them squarely, their impulse to do the good thing will prevail."

Other important points made in the discussion were the tendency of the negro to conceal disease, the danger of increasing that tendency by compulsory hospitalization, and the advantage of employing negro nurses, who command the confidence of people of their own race where white doctors and nurses cannot.

It is a comely fashion to be glad—
Joy is the grace we say to God.

—Jean Ingelow.